

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1

7

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 09/19/2019		2. CONTRACT NO. (If any) EP-C-16-006		6. SHIP TO:	
3. ORDER NO. 68HERC19F0290		4. REQUISITION/REFERENCE NO. PR-OW-19-00415		a. NAME OF CONSIGNEE AWPB-MB	
5. ISSUING OFFICE (Address correspondence to) CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001				b. STREET ADDRESS US EPA-OW-OWOW-AWPD-MB 1200 PENNSYLVANIA AVE., NW MC-4503-T	
				c. CITY WASHINGTON	e. ZIP CODE 20460
7. TO: ROBERT ERICKSON				f. SHIP VIA	
a. NAME OF CONTRACTOR ESS GROUP, INC.				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 10 HEMINGWAY DR # 2				REFERENCE YOUR: Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
d. CITY RIVERSIDE		e. STATE RI	f. ZIP CODE 02915	Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE AWPD-MB	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					
12. F.O.B. POINT					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) Multiple	
a. INSPECTION Destination	b. ACCEPTANCE Destination				
16. DISCOUNT TERMS					

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 019131986 TOCOR: Brian Topping Max Expire Date: 01/19/2019 Invoice Approver: Brian Topping Alt Invoice App: Damaris Christensen Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:						
	a. NAME RTP Finance Center						\$574,004.00
	b. STREET ADDRESS (or P.O. Box) US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts						\$574,004.00
c. CITY Durham		d. STATE NC	e. ZIP CODE 27711				17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

09/19/2019

ELECTRONIC SIGNATURE

23. NAME (Typed)
Nicholas Bisher
TITLE: CONTRACTING/ORDERING OFFICER

ORDER FOR SUPPLIES OR SERVICES

PAGE NO

SCHEDULE - CONTINUATION

2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
09/19/2019	EP-C-16-006	68HERC19F0290

ITEM NO.	SUPPLIES/SERVICES	QUANTITY ORDERED	UNIT	UNIT PRICE	AMOUNT	QUANTITY ACCEPTED
(a)	(b)	(c)	(d)	(e)	(f)	(g)
0001	Admin Office: CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001 Period of Performance: 09/19/2019 to 09/18/2020 ***Option Form 347, Box 11. Business Classification should indicate that Great Lakes Environmental Center is a "small" business. However, it is marked as "other than small" business due to a system error.*** BASE PERIOD: Provide Services in accordance with the attached Performance Work Statement, Attachment 1 to this Task Order entitled "Development of Streamflow Duration Assessment Methods: Field Sampling for the Northern Plains and Southern Plains Regions (SDAM-NP-SP)." Delivery: 09/18/2020 Accounting Info: 19-20-B-87DE-000B88-2505-1987EE9010-00 1 BFY: 19 EFY: 20 Fund: B Budget Org: 87DE Program (PRC): 000B88 Budget (BOC): 2505 DCN - Line ID: 1987EE9010-001 Funding Flag: Partial Funded: \$574,004.00				574,004.00	
0002	OPTION PERIOD 1: Provide Services in accordance with the attached Performance Work Statement, Attachment 1 to this Task Order entitled "Development of Streamflow Duration Assessment Methods: Field Sampling for the Northern Plains and Southern Plains Regions (SDAM-NP-SP)." (Option Line Item) 09/18/2020 Delivery: 01/19/2021 Continued ...					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$574,004.00

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER
09/19/2019

CONTRACT NO.
EP-C-16-006

ORDER NO.
68HERC19F0290

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
9999	ADMINISTRATIVE TRACKING PURPOSES ONLY				0.00	
TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))						\$0.00

PERFORMANCE WORK STATEMENT
Technical Support for National Aquatic Resource Survey
TASK ORDER: TBD

A. TITLE: Development of Streamflow Duration Assessment Methods: Field Sampling for the Northern Plains and Southern Plains Regions (SDAM-NP-SP)

B. EPA PERSONNEL

Task Order Contracting Officer Representative (TOCOR):

Name: **Brian Topping**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Freshwater and Marine Regulatory Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
Telephone: 202-262-5653
E-mail: topping.brian@epa.gov

Alternate Task Order Contracting Officer Representative (ALT - TOCOR):

Name: **Damaris Christensen**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Program Development and Jurisdiction Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
Telephone: 202-566-0371
E-mail: christensen.damaris@epa.gov

C. ESTIMATED PERIOD OF PERFORMANCE

Base Period: 12 months from Award

Option Period: 4 months from completion of Base period

D. TYPE OF TASK ORDER: Cost plus Fixed Fee (CPFF)

I. BACKGROUND:

The Clean Water Act (CWA) Section 404 regulatory program permits a wide range of projects which impact waters of the United States. Under CWA Section 404 the US Army Corps of Engineers (Corps), or states who have assumed the permit program, issue the permits in compliance with regulations established by the Environmental Protection Agency (EPA). EPA reviews public notices for proposed projects and policies, approves assumption of permit programs, and works with the Corps and states on ways to enhance the efficiency and effectiveness of 404 programmatic implementation.

One of the key components in implementing the 404 regulatory program is to conduct jurisdictional determinations to identify what type of water bodies are present on a project site and whether those waterbodies are regulated under the CWA. Determining the jurisdictional status of stream channels often requires the ability to identify whether the flow duration of the stream in question is perennial, intermittent, or ephemeral. However, long-term hydrologic data to assess streamflow duration are limited, especially for intermittent and ephemeral streams; and regulators need a site-specific rapid method for determining streamflow duration at sites where long-term hydrologic data are not available.

Streamflow duration assessment methods (SDAMs) are rapid field-based assessment tools that utilize physical, hydrological, and biological indicators to determine the flow duration of streams (i.e., perennial, intermittent, or ephemeral) and are one type of tool that could be relied on to effectively conduct jurisdictional determinations for streams under section 404 of the CWA. Currently, the Pacific Northwest (PNW) region has an approved SDAM developed and used by EPA, the Corps, and the States of Oregon, Washington, and Idaho since 2015. The Streamflow Duration Assessment Method for the Pacific Northwest can be found here: <https://www.epa.gov/measurements/streamflow-duration-assessment-method-pacific-northwest>. Additionally, over the past couple of years the EPA has been working with the US Army Corps of Engineers Corps to develop regional SDAMs for use throughout the Arid Southwest (ASW) and Western Mountains (WM) regions.

The focus of this task is to support the development of regional SDAMs for use throughout the Northern Plains (NP) and Southern Plains (SP) regions. The process of developing a streamflow duration assessment method involves six key steps: preparation, baseline site data collection, validation study, data analysis and method development, rollout, and continuous baseline sampling (Table 1). The work under this Task Order (TO) will focus specifically on conducting the field sampling and data collection necessary to carry out the baseline and validation study steps of the method development process. This task will build on the existing work that has been conducted in the PNW, ASW, and WM regions, testing the performance of existing assessment methods and flow duration indicators in order to develop methods specific to the NP and SP regions. The NP and SP regions as used in this TO are defined as all or parts of Montana, Wyoming, North Dakota, South Dakota, Minnesota, Wisconsin, Michigan, Illinois, Iowa, Nebraska, Kansas, Missouri, Oklahoma, Colorado, New Mexico, and Texas found in the Northern Plains or Southern Plains regions as identified in the Corps Ordinary High Water Mark (OHWM) Scientific Support Document, found here: <https://erdc-library.erdc.dren.mil/xmlui/handle/11681/20650> (Figure 1).

Table 1. Description of the six steps involved in the method development process. The work under this TO is focused on the baseline data collection and validation study steps (highlighted in grey).

Process Step	Description
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Preparation	Literature review, identification and evaluation of potential hydrologic data sources, and coordination with state, federal, and academic partners to identify regionally specific indicators of flow duration and select sites for baseline data collection and validation studies.
Baseline data collection	Instrumentation of sites for a minimum of one year to confirm “true” flow duration, with at least three site visits to collect streamflow indicator data during this time. Baseline sites will include at least one case study to sample multiple sites within the same watershed, along the flow duration gradient, which will allow for exploration of questions related to the spatial and temporal variability of flow. (10% of baseline sites install redundant instrumentation (2 loggers))
Validation study	Collection of streamflow indicator data at sites with known flow duration across the region. Validation study sites are independent of the baseline sites. (10% of validation sites resampled)
Method development	Data analysis to develop a regionally specific method. This step also includes internal peer-review and interagency agreement prior to release of the interim method.
Rollout	Engagement with stakeholders on the method, as well as technical support and training for staff. This step also includes a one-year comment period on the interim method, an external peer-review, and any final revisions.
Continuous baseline sampling	Instrumentation is maintained at all baseline sites and data collection continues on an annual basis to ensure that method development was not biased by interannual climatic and streamflow variation.

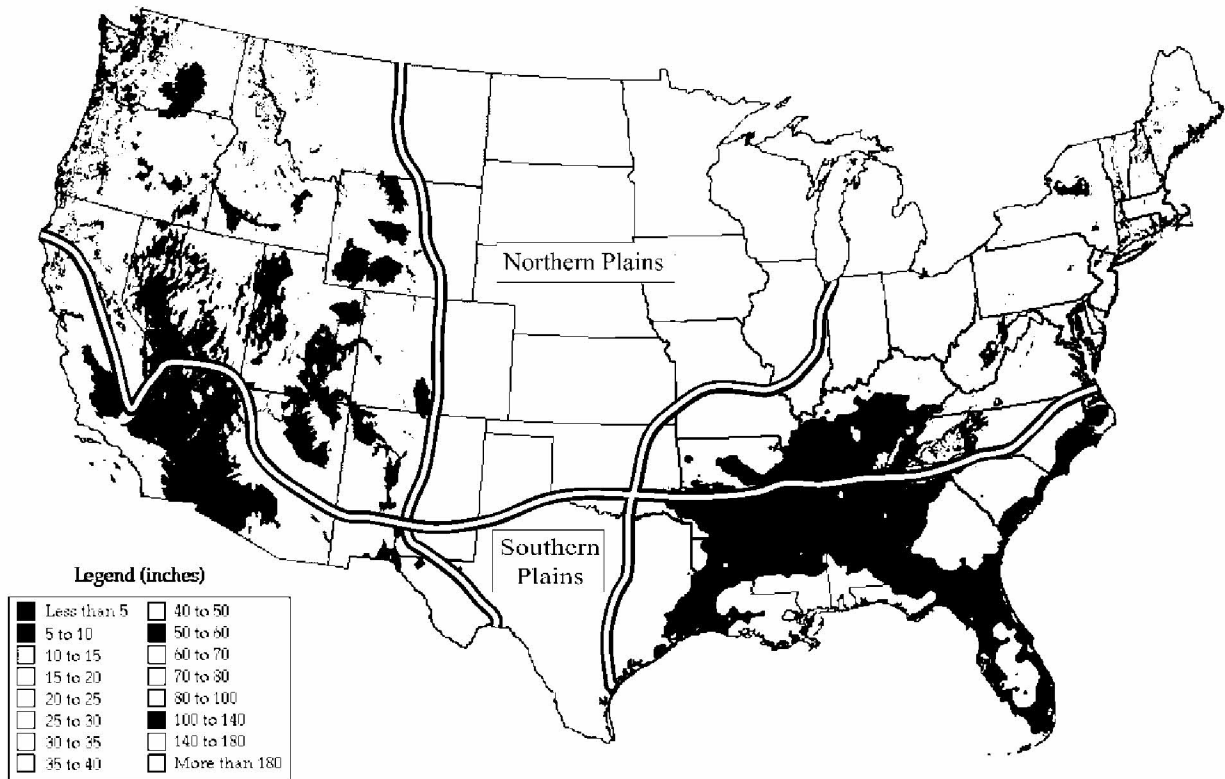


Figure 1. Map of regions identified in the US Army Corps of Engineers Ordinary High Water Mark (OHWM) Scientific Support Document. The Northern Plains (NP) region and the Southern Plains (SP) region are labeled. (figure modified from Wohl et al., 2016).

For the purposes of the work under this TO, a stream can be described as a channel containing flowing surface water including:

- *stormflow* – increased streamflow resulting from the relatively rapid runoff of precipitation from the land as interflow (rapid, unsaturated, subsurface flow), overland flow, or saturated flow from surface water tables close to the stream channel, or;
- *baseflow* – flow resulting from ground water entering the stream or sustained melt water from glaciers and snowmelt (observed during long gaps between rainfall events), or;
- a combination of both stormflow and baseflow, and;
- contributions of discharge from upstream tributaries as stormflow or baseflow, if present.

*Note: For the purposes of this work the descriptor ‘stream’ is attached to the channel, and applies regardless of whether flow dries up seasonally or otherwise.

In this task, a stream is classified into one of three flow-duration classes:

- *Ephemeral* streams flow only in direct response to precipitation. Water typically flows only during and shortly after large precipitation events. Ephemeral streams may or may not have a well-defined channel, the streambed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and in some instances physical characteristics commonly associated with the continuous or intermittent conveyance of water.
- *Intermittent* streams are channels that contain water for only part of the year, typically during the rainy season, where the streambed may be below the water table and/or where the snowmelt from surrounding uplands provides sustained flow. The channel may or may not be well-defined. The flow may vary greatly with stormwater runoff. An intermittent stream may lack the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- *Perennial* streams contain water continuously during a year of normal rainfall, often with the streambed located below the water table for most of the year. Groundwater supplies the baseflow for perennial streams, but flow is also supplemented by stormwater runoff or snowmelt. A perennial stream typically exhibits the biological, hydrological, and physical characteristics commonly associated with the continued conveyance of water.

Duration, frequency, and timing of streamflow or drying, as well as flow magnitude, are fundamental properties of streams (Poff and Ward 1989; Winter et al. 1998) which can influence the structure and function of stream ecosystems (e.g., Chadwick and Huryn 2007; Fritz et al. 2008; Austin and Strauss 2011; Datry 2012). Watershed geology, climate, topography, soils, vegetation and human activities can all influence streamflow (Winter et al. 1998; Winter 2007). Water to support streams can originate from numerous sources within a watershed including overland flow from rainfall or snowmelt, shallow subsurface flow through the unsaturated zone, and ground-water discharge (Winter 2007).

As a stream flows from its origin, water may be derived primarily from stormflow, baseflow, or some combination of the two. Streams typically continue to accumulate water from stormflow, baseflow and other tributaries as they flow downstream. As streams accumulate flow they commonly transition along a gradient from ephemeral to intermittent and perennial, but sometimes quickly transition from ephemeral to perennial in high gradient systems, or transition from perennial to ephemeral or to total cessation of surface flow. Often these changes are gradual and may not be obvious to the casual observer. There are, however, indicators of streamflow that can be used to characterize the flow duration of a stream along a particular reach as ephemeral, intermittent or perennial. In the TO, duration encompasses the concept of the cumulative time period of flow over the course of a year, which may vary interannually with climate, groundwater withdrawal or streamflow diversion, and other water use patterns.

This TO is part of a larger effort focused on identifying and testing the methods and indicators available to rapidly identify stream flow duration of any stream reach in a single site visit.

Work under this TO requires expertise in field sampling and assessment methodology for headwater stream systems including techniques to measure and characterize various geomorphological, hydrological, and biological metrics such as channel dimension and structure, hydric soil indicators, hydrophytic plant identification, and aquatic macroinvertebrate identification. The work conducted under this TO will be supported by a Steering Committee (SC) comprised of staff from EPA Headquarters, Regions and Office of Research and Development, staff from the local Corps Districts, the Corps Engineer Research and Development Center (ERDC), and other EPA designees.

EPA will lead development of an overarching quality assurance project plan (QAPP) for flow duration method development that will cover all activities under this task.

II. PURPOSE

The purpose of this TO is to provide field sampling support for the development of regional SDAMs for use throughout the Northern Plains (NP) and Southern Plains (SP) regions. The work under this TO will focus specifically on conducting the field sampling and data collection necessary to carry out the baseline and validation study steps of the method development process. In particular, the contractor will schedule and deploy field crews to collect data at selected streams. The contract field crews shall adhere to strict quality assurance and quality control (QA/QC) requirements, including attendance at the SDAM training session; use of appropriate supplies and equipment; and adherence to data reporting requirements and deadlines.

III. GOVERNMENT FURNISHED INFORMATION

The EPA TOCOR will provide the following references via email as they become available.

- Reference 1: SDAM-NP-SP Quality Assurance Project Plan (QAPP)
- Reference 2: SDAM-NP-SP Field Protocol (FP)
- Reference 3: SDAM-NP-SP Field Data Sheets
- Reference 4: SDAM-NP-SP Baseline and Validation Sites
- Reference 5: STIC Data Logger Protocol

As they become available, the EPA TOCOR will provide the contractor with revisions of relevant documents, including the QAPP and Field Protocol, and any other information deemed necessary for the contractor to provide the support for the Performance Work Statement (PWS).

During the period of performance, EPA will provide the contractor with:

- Training for the contractor's field crews in the fall of 201920.
- Assistance visits for the field crews in the fall of 201920

IV. GENERAL REQUIREMENTS

In providing support under the tasks described in Section V, the contractor also shall adhere to the following general requirements:

1. Deliverables (see Contract PWS B.1)

Memoranda shall be placed on company letterhead and the subject line shall include the phrase “EPA Contract EP-C-16-0XX”. When transmitting deliverables by email, subject headers should include the contract, task order, and deliverable description (e.g., “EP-C-16-0XX TO X: QAPP Signature Pages”).

All electronic files shall be clearly named using the project abbreviation, a logical abbreviation for the name of the document (e.g., QAPP), the contractor name (abbreviated), and the date of edits to assist in version control (e.g., SDAM-NP-SP_QAPP_XX_YYYYMMDD). Proposed edits shall be provided in tracked changes in the original file format (e.g. MS Word). Final versions shall be provided to EPA in both the original format (e.g., Word, PowerPoint) and PDF versions (if necessary, EPA will modify the files to be Section 508 compliant).

Unless specified differently by the EPA TOCOR in written technical direction (per Contract Clause H.12), the contractor shall ensure that documentation is created using Agency standard software formats (e.g., Microsoft Office) to facilitate EPA use and review.

2. Meetings (see Contract PWS Clause B.2)

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency’s official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

3. The contractor shall follow the provision of EPA prescription 1523.703-1, *acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting /conference services on behalf of the Agency. No single event under this TO is anticipated to exceed \$20,000. The contractor shall immediately notify the EPA Contracting Officer, PO and TOCOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audio visual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

4. As required, the TOCOR shall provide technical direction in accordance with Clause H-12 of the contract, EPAAR 1552.237-71 TECHNICAL DIRECTION (AUG 2009) and the Contract Level PWS. Any changes in cost or scope must be approved in writing by the contracting officer.

5. Government Furnished Property (GFP): There will be no GFP provided to the contractor during the performance of this task order. In accordance with FAR 45.102, the contractor shall be required to furnish all property necessary to perform this Task Order. This Task Order does not include the provision of contractor acquired property.

V. SCOPE OF WORK

Task 1. Monthly progress reports (See Contract Attachment 2 and 3; PWS B.2)

The contractor shall manage the Task Order (TO) and submit monthly progress and financial reports prepared and submitted in accordance with the contract clause, Attachment 2, Reports of Work. The monthly progress and financial reports shall be broken out by task. The monthly progress report shall include project status, number of sites sampled (current and cumulative), identify sites sampled during the reporting period, unexpected problems or concerns, lessons learned, quality assurance/ quality control (QA/QC) activities, and next steps. The contractor also shall brief the TOCOR on progress during periodic (e.g., weekly) teleconferences during periods of intense activity.

Deliverables and Schedule under Task 1:

Task	Deliverable	Due
1	Progress and financial reports	Monthly
	Calls with EPA	Per written technical direction by the TOCOR (per Contract Clause H.12)

Task 2. Quality Assurance (Contract PWS B.3)

Quality Assurance (QA) is an important component of EPA's work to assure that minimum quality standards are attained. The contractor shall address the QA requirements of this task order by adhering to the requirements and procedures identified in:

- The contractor's customized Quality Management Plan incorporated into this contract;
- SDAM-NP-SP QA documents which document how quality assurance and quality control will be applied to the collection of environmental data for the survey. The documents relevant to support in this task order are:
 - SDAM-NP-SP Quality Assurance Project Plan (QAPP)
 - SDAM-NP-SP Field Protocol (FP)

The SDAM-NP-SP QA documents may evolve throughout the task order. The contractor shall notify the EPA TOCOR immediately if it identifies areas where its previous activities are not

consistent with the revisions made to the QAPP and FP. The EPA TOCOR will determine whether any modifications to the contractor's previous activities will be necessary, which may require a modification to the task order by the EPA Contracting Officer (CO).

- a. As demonstration of the contractor's commitment to adhere to the SDAM-NP-SP QAPP, the contractor shall:
 - Ensure that all sampling personnel have reviewed and understand the requirements and procedures of the SDAM-NP-SP QAPP, and the SDAM-NP-SP Field Protocol FP which will be available prior to the field crew training sessions. The certification page entitled "Review & Distribution Acknowledgment and Commitment to Implement" is located in the introductory section of the QAPP.
 - At a minimum, the following personnel shall sign the certification page for the QAPP approved by EPA's Quality Assurance Officer (QAO):
 - Contractor's Task Order Leader
 - Contractor's Quality Assurance Officer,
 - **Each crew leader must provide the signed certification page before the crew may commence with sampling events.**
 - At the contractor's discretion, it may also be appropriate for each field crew member to sign the certification page and transmit to EPA.
 - The contractor's QAO also shall sign the certification page for each revision of the QAPP that has been approved by EPA's QAO.
 - If EPA distributes updated versions of the QA documents and states that it contains a "significant change" relevant to field sampling, the contractor shall acknowledge, in writing (e.g., Email), that it has received and distributed the revised QA documents to the appropriate personnel. If any change will impact the scope and/or cost of the task order, the contractor shall notify the TOCOR and CO immediately.
- b. **The contractor shall assign only staff who are Key Personnel (EPAAR 1552.237-72) to be field crew leaders (Tasks 6, 7, and 8) and ensure that the other field crew members have proper experience, field training, and acceptable educational credentials.** At a minimum, each proposed field crew leader shall have at least three years of experience in leading field crews; and at least three years of experience in conducting physical habitat assessments, hydrophytic plant identification, hydric soil identification, hydrologic monitoring of sites, and aquatic macroinvertebrate field identification. All field crew leaders shall also:
 - i. **Complete the SDAM-NP-SP training requirements per Task 3.**
 - ii. Perform pre-sampling (i.e., in-office) testing of hardcopy and electronic field forms.
 - iii. **Verify that contractor's equipment (e.g., GPS system) is properly calibrated and maintained.**
 - iv. Permit EPA to perform an Assistance Visit (AV) of its field crews during an early sampling event (e.g., the first to fourteenth sampling event by a crew). If a field crew leader oversees more than one crew, EPA will determine if it is

necessary to visit each crew or whether fewer visits will meet its quality review objectives (e.g., depending on crew composition, the crews might be viewed as essentially the same). The contractor shall coordinate with EPA, or its designee, on an agreed upon date and location for the AV. EPA, or its designee, will conduct the AV using a checklist provided by EPA, supplemented by photographs if appropriate (e.g., to record a deviation in methods due to extenuating circumstances). Although EPA will arrange for the AVs, it is the contractor's responsibility to ensure that the contractor field crews are abiding by the requirements and procedures of the QAPP and FP at all assigned sites.

- c. As demonstration of the contractor's implementation of QA in performing the other tasks in this PWS, the contractor shall document its QA activities as follows:
 - i. Reports of relevant QA activities in any deliverable. All QA documentation prepared under the task order shall be considered non-proprietary, except for the internal distribution list which may be claimed proprietary.
 - ii. Monthly reports of QA activities performed during implementation of this task order. These monthly QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the SDAM-NP-SP QAPP, and corrective actions taken. The contractor shall include the QA report with the monthly progress report. In addition, the contractor shall immediately bring to the attention of the TOCOR any QA problems that may affect the conduct of the tasks or the project, with recommendations for corrective actions.
- d. As demonstration of the contractor's commitment to continuous quality improvements, the contractor shall provide summaries of "lessons learned" based upon its support to the other tasks. EPA will use this information to improve future development of flow duration assessment methods for streams. The contractor shall incorporate EPA comments into revised versions.

Deliverables and Schedule under Task 2:

Task	Deliverable	Due
2.a	Signature page for each version of QAPP approved by EPA's QAO:	
	- With contractor's QAO and Task Order Leader signatures.	- No later than 5 working days after receiving the approved QAPP with EPA QAO's signature
	- With crew leader signature	- At training
	Email acknowledgement of Field Protocol (FP) with "significant change"	No later than 10 working days after receiving revised FP

Task	Deliverable	Due
2.b	Memo with qualifications of field crew members, other than the field crew leaders	With first draft of the schedule for field crews in each season. Unless circumstances change unexpectedly, qualifications of replacements, except key personnel, must be submitted at least one week prior to the sampling event. See key personnel clause for process for replacements through a task order modification.
2b.ii	Email with outcome of testing field forms with any recommended changes	5 working days after receiving the first electronic/paper version of field forms. 1-5 working days after receiving subsequent versions, depending on extent of revision and schedule implications.
2.b.iii	Access to contractor's calibration and maintenance records	Within 5 working days after receiving written technical direction from the TOCOR (per Contract Clause H.12)
2.b.iv	Allow access for EPA or its designee to conduct an assistance visit to each field crew	Per written technical direction from the TOCOR (per Contract Clause H.12), based upon scheduling discussions occurring prior to each crews first sampling event
2.c.i	Documentation of QA activities	In deliverables
2.c.ii	Monthly reports of QA activities and immediate notice as needed	With monthly progress report and immediate notice as needed
2.d	Memorandum 1 with lessons learned for baseline data collection	Within 20 days from the end of the first sampling season. Revisions within 5 work days.
	Memorandum 2 with lessons learned for baseline and validation data collections	Within 30 days from the end of the last sampling event. Revisions within 5 work days.

Task 3. Field Training (Contract PWS C.1.g)

EPA and our designees will host at least one two day training session as soon as one month after award. This training will be at a location in the NP or SP region, use Kansas City, MO for cost estimation purposes. This training course will provide participants with training on the previously developed study design and to conduct baseline sampling according to the approved field protocol, an example of which can be found in PWS Attachment 1. (Note: the field protocol to be implemented throughout this TO may be identical to the example found in Attachment 1 or

may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) work completed under this TO in Tasks 6 or 7). The trainings will also cover instrumentation of sites with Stream Temperature, Intermittency, and Conductivity (STIC) data loggers (to be provided and maintained by the contractor), as well as resampling, data retrieval, relaunching, and replacement (*see* PWS Attachment 2). The training will include one 2-hour webinar (e.g., overview and forms) and a 2 day in-person training including classroom and field training. It is preferable that all crew members participate in training activities, but at a minimum the contractor shall ensure that each field crew leader participates in a training session unless the EPA TOCOR issues written technical direction (per Contract Clause H.12). The contractor shall be responsible for maintaining records of training for all field crew leads and members in the project file, including names, dates, locations, and training description. The contractor shall report out, each month, on any associated training costs (e.g., travel, LOE, etc.) broken out by training using the template provided by the EPA TOCOR.

Deliverables and Schedule under Task 3:

Task	Deliverable	Due
3	Attend training webinar and class	As soon as one month after award
3	Maintain Training Record	As trainings occur
3	Report out on costs associated with attending EPA SDAM-NP-SP trainings	With monthly progress report

Task 4. Schedule (See Contract PWS C.2)

One purpose of the field sampling schedule is to ensure that the contractor will sample sites steadily during each sampling season (see Tasks 6, 7, and 8). Prior to the start of each season, EPA will provide the contractor with the list of sites to be sampled (unless the sampling is a follow-up visit to baseline sites), along with any details regarding priorities that must be taken into account in establishing the schedule (e.g., order of sampling for a specific season). As needed, the TOCOR shall issue written technical direction related to this information. Before the start of each field season, the contractor shall provide EPA with the first draft with tentative sampling dates and crew assignments for all sites to be sampled that season. Throughout the season, the contractor shall revise the schedule to incorporate the EPA TOCOR's written technical direction (per Contract Clause H.12) or mitigating factors, including, but not limited to, weather, field crew changes, and unanticipated delays.

- a. Baseline site sampling schedule
- b. Baseline site first revisit schedule

- c. Baseline site second revisit and validation site sampling schedule
- d. For any site, if upon arrival on location, the contractor finds that conditions are not appropriate for sampling (i.e. the stream no longer exists), the contractor shall discontinue sampling and notify the EPA TOCOR that a replacement site is necessary. The contractor shall revise the schedule to include the new site.

Deliverables and Schedule under Task 4:

Task	Deliverable	Due
4.a	First draft of baseline site sampling schedule	First draft due within one week of receipt of site list. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.b	First draft of baseline site revisit schedule	First draft due within one month of the completion of baseline site sampling. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.c	First draft of baseline site and validation site sampling schedule	First draft due within three weeks of receipt of the validation site list. Revisions per written technical direction by the TOCOR (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.d	Notification of site conditions	As soon as possible per availability of phone or email access.

Task 5. Preparation for Field Sampling (See Contract PWS C.1)

The contractor shall prepare for field sampling visits as follows:

- a. The contractor shall be responsible for providing consumable materials as described in the QAPP and the Field Protocol. These materials include but are not limited to paper copies of field sheets, sampling containers, and consumable sampling equipment (e.g., paper towels, falcon tubes (filled with 70% ethanol), plastic bags).
- b. The contractor shall arrange for and supply vehicles, staff, and all other necessary non-consumable equipment to the field crews including, but not limited to, STIC data loggers, kicknets, field guides, clinometers, tape measurers, densimeters, and GPS devices.

Deliverables and Schedule under Task 5:

Task	Deliverable	Due
5.a	Consumable supplies	During field sampling visits
5.b	Supply equipment	During field sampling visits

Task 6. Initial Field Sampling Visits for Baseline Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 180 baseline sites across the NP and SP regions. The sites, which will be preselected by the steering committee, will be spread across the NP and SP regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more sites per day. During the initial site visit the contractor will conduct the approved sampling methodology, as well as deploy STIC loggers (to be provided and maintained by the contractor) at each site using the protocol found in PWS Attachment 2 - Stream Temperature, Intermittency, and Conductivity (STIC) Data Loggers Protocol. At 10% of the sites two STIC loggers will be deployed. The field protocol to be implemented under this Task may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, or 2) preparation work for the NP and SP regions. Samples will not be collected as part of the protocol; however, voucher specimens may be collected to confirm identification if needed (*see* PWS Attachment 1). In the event that voucher specimens are needed, sample handling will be conducted in accordance with the QAPP. Data will be entered onto paper data sheets (or a directly into a digital template, if available), and data sheets will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Instrumentation and initial baseline site visits for the combined NP and SP region

Following the site selection and approval of the sampling protocol by the steering committee, the contractor will oversee equipment installation and initial data collection for at least 180 baseline sites in the combined NP and SP region. Data collection, along

with data entry and QA activities shall be completed within the first 3 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 6:

Task	Deliverable	Due
6.a	Collect data, complete data entry, and QA activities for all 180 baseline sites in the combined NP and SP regions	Within 3 months of task order award

Task 7. Follow-Up Field Sampling Visits for Baseline Sites (See Contract PWS C.2)

The contractor will conduct at least two additional site visits for all baseline sites across the NP and SP regions to implement the approved study design and sampling methodology. Follow-up site visits should be planned so that over the span of one year, all baseline sites will be visited a total of three times across multiple seasons; ideally, intermittent sites will be visited during both the wet and dry phases. During the follow-up site visits the contractor will conduct the approved indicator sampling methodology and download STIC logger data using the protocol found in PWS Attachment 2. The field protocol to be implemented under this Task may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the technical steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) preliminary findings from work completed under Task Area 6 of this TO. Samples will not be collected as part of the protocol; however, voucher specimens may be collected to confirm identification if needed (*see* PWS Attachment 1). In the event that voucher specimens are needed, sample handling will be conducted in accordance with the QAPP. Data will be entered onto paper data sheets (or a directly into a digital template, if available), and data sheets will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into an Access database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Second site visit for the NP and SP regions

Using the approved study design and the sampling protocol, the contractor will conduct a second site visit for all baseline sites in the NP and SP region. Data

collection for the second site visits, along with data entry and QA activities, shall be completed within 9 months of task order award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Third site visit for the NP and SP region (Option Period 1 activity)

Using the approved study design and the sampling protocol, the contractor will conduct a third site visit for all baseline sites in the NP and SP region. Data collection for the third site visits, along with data entry and QA activities, shall be completed within 14 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 7:

Task	Deliverable	Due
7.a	Collect data, complete data entry, and QA activities for all 180 baseline sites in the NP and SP region	Within 9 months of task order award
7.b	Collect data, complete data entry, and QA activities for all 180 baseline sites in the NP and SP region	Within 14 months of task order award

Task 8. Field Sampling Visits for Validation Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 110 validation sites across the NP and SP regions with 10% identified as resample sites (total of 121 sampling events). The sites, which will be preselected by the technical steering committee, will be spread across the NP and SP regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more than sites per day. During the site visit the contractor will conduct the approved sampling methodology. The field protocol to be implemented under this Task Area may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) preliminary findings from work completed under Tasks 6 and 7 of this TO. Samples will not be collected as part of the protocol; however, voucher specimens may be collected to confirm identification if needed (*see* PWS Attachment 1). In the event that voucher specimens are needed, sample handling will be conducted in accordance with the QAPP. Data will be entered onto paper data sheets (or a directly into a digital template, if available), and data sheets will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Validation study for the NP and SP region

Following the site selection and approval of the sampling protocol by the technical steering committee, the contractor will oversee data collection for at least 110 validation sites in the NP and SP region. Data collection, along with data entry and QA activities shall be completed within the first 12 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 8:

Task	Deliverable	Due
8.a	Collect data, complete data entry, and QA activities for	Within 12 months of task order award

Task	Deliverable	Due
	all 110 validation sites (121 sampling events) in the NP and SP region	

Task 9. Post-Sampling Activities (See Contract PWS C.2)

The contractor shall make field crews available to respond to EPA's post-sampling questions about the field sampling observations and procedures that might affect the data values and quality. If questions come from sources other than the EPA TOCOR (e.g., Other contractors working on this project), copy the EPA TOCOR on the email response or provide a summary by email (e.g., if the questions were posed through telephone conversations).

Unless the TOCOR grants an exception in accordance with agency procedures, the contractor shall refrain from publishing findings based upon work conducted under this task order. This restriction shall remain in effect until EPA provides public access to the data.

Deliverables and Schedule under Task 9:

Task	Deliverable	Due
9	Email responding to data questions	Within 5 working days, if field crew is available. Otherwise, provide email within 5 days with expected response date.

VI. TRAVEL

This section provides a summary of the travel requirements described in Section V. Assume each field crew contains 2 or more members, one of which is a crew leader. Here are assumptions to use in costing:

Task V.3 (Training) –

- All crew leaders, other key personnel and crew members attend a two day EPA coordinated training prior to starting field sampling. (Training location(s) will be within the NP and/or SP regions – Kansas City, MO can be used cost estimation; however, actual training location(s) selected after award may differ from those used in this costing.)

Task V.6, 7, and 8 (Sampling) –

- For every site, one field crew of 2 or more members travel to the site
- Total of 661 site visits identified in Tasks 6, 7, and 8.
- Travel costs are minimized to the extent possible (e.g., combining nearby sites into one trip for the same crew).

VII. Quality Assurance Surveillance Plan (QASP)

EPA will judge performance using the following Quality Assurance Surveillance Plan (QASP).

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
<p>Management and Communications:</p> <p>The Contractor shall maintain contact with the EPA TOCOR throughout the performance of the task order and shall immediately bring potential problems to the attention of the EPA TOCOR. In cases where issues have a direct impact on field sampling activities, project schedules (i.e., not each sampling event), cost, time, or quality, the contractor shall provide options for EPA's consideration on resolving the issues or mitigating their impacts.</p>	<p>Any issue adversely impacting project schedules, cost, time or quality shall be brought to the attention of the EPA TOCOR:</p> <p>i) If the contractor requires EPA guidance during a sampling event, the contractor must contact EPA prior to completing the sampling activities.</p> <p>ii) If the contractor identifies an issue that could affect multiple crews, the contractor shall contact EPA that day so that direction can be provided to all crews in the field.</p> <p>iii) If the contractor identifies sampling issues that are otherwise not urgent, the contractor shall contact EPA within 5 working days.</p>	<p>EPA TOCOR will identify unreported issues.</p>	<p>Four or more incidents where the contractor:</p> <ul style="list-style-type: none"> Does not provide timely notification; or Created a severe adverse situation <p>will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p> <p>Fewer than four incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p>
<p>Timeliness:</p> <p>Completed field sampling data forms and data shall be delivered in accordance with the requirements of the QAPP.</p>	<p>No more than 10% of the database entry and field sampling forms shall be submitted more than 5 working days past the requirements in the QAPP. If the field form or database entry has not been completed correctly, it will be considered a failure of timeliness.</p>	<p>Delivery for 100% of the database entry and field forms will be tracked by the EPA TOCOR and compared against the requirements in the QAPP.</p>	<p>10 or more incidents where the contractor does not meet the measurable performance will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Schedule.</p> <p>Fewer than ten incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System.</p>
<p>Cost Management and Control:</p> <p>The Contractor shall monitor, track, and accurately report cost and</p>	<p>The contractor shall manage costs to the level of approved ceiling on the task order. The contractor shall notify the TOCOR, PO and CO when 75% of the</p>	<p>The TOCOR will compare actual versus projected expenditures on a monthly basis (via meetings, monthly progress reports &</p>	<p>Unsatisfactory rating under the category of Cost Control in CPARS when the contractor does not meet the</p>

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
fee expenditures to EPA through progress reports and approved special reporting requirements. The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate cost control.	approved funding ceiling for the task order is reached.	milestones established for each deliverable).	measurable performance standards. An acceptable rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the measurable performance standards and accurately reports the costs.
Technical Effort: The Contractor shall assign appropriately leveled and skilled personnel to all tasks; and abide by the contractor's QMP, the field protocol, and QAPP.	No more than 25% of reviewed deliverables and data shall require revisions to meet the requirements. All of the assigned staff must meet the requirements in the field protocol, and QAPP.	100% of the data and staffing will be reviewed by the EPA TOCOR to identify noncompliance issues.	Unsatisfactory rating under the category of Quality in CPARS when the contractor does not meet the measurable performance standards during an applicable period of performance.

Attachment 1: SDAM Field Protocol – “Flow Duration Protocol: Adapted from NM and PNW Assessment Methods”

Attachment 2: STIC Data Loggers Protocol – “Calibrating, Deploying, Retrieving Stream Temperature, Intermittency, and Conductivity (STIC) Data Loggers, and Downloading and Converting Data”

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE OF PAGES		
					1 4		
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00001		See Block 16C		PR-OW-20-00279			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
CAD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: W136							
Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x) 9A. AMENDMENT OF SOLICITATION NO.			
ESS GROUP, INC.							
Attn: ROBERT ERICKSON				9B. DATED (SEE ITEM 11)			
10 HEMINGWAY DR # 2							
RIVERSIDE RI 02915							
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-16-006			
				68HERC19F0290			
				10B. DATED (SEE ITEM 13)			
				09/19/2019			
CODE 019131986		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				(b)(4)			
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE		A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
		B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).					
x		C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Bilateral - Mutual Agreement of the Parties					
		D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 019131986							
The purpose of this Modification is to:							
1. Increase the total cost of the Base Period and Option Period 1 to account for in-scope changes to the Flow Duration Protocol and Standard Operating Procedures for the Processing of Benthic Macroinvertebrates from Streamflow Duration Assessment Method (SDAM) Development. This results in an (b)(4)							
(b)(4)							
(b)(4)							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Nicholas Bisher			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 05/14/2020	

CONTINUATION SHEET

 REFERENCE NO. OF DOCUMENT BEING CONTINUED
 EP-C-16-006/68HERC19F0290/P00001

PAGE 2 OF 4

 NAME OF OFFEROR OR CONTRACTOR
 ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Period. TOCOR: Brian Topping Max Expire Date: 01/19/2019 InvoiceApprover: Brian Topping Alt Invoice App: Damaris Christensen LIST OF CHANGES: Reason for Modification: Supplemental Agreement for work within scope Total Amount for this Modification: (b)(4) New Total Amount for this Version: (b)(4) New Total Amount for this Award: (b)(4) Obligated Amount for this Modification: (b)(4) New Total Obligated Amount for this Award: (b)(4) CHANGES FOR LINE ITEM NUMBER: 2 Total Amount changed (b)(4) CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB (b)(4) CHANGES FOR LINE ITEM NUMBER: 1 Total Amount changed (b)(4) Obligated Amount for this Modification: (b)(4) CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB (b)(4) NEW ACCOUNTING CODE ADDED: Account code: 20-21-B-87DE-000B88-2505-2087EE4007-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) B Budget Organization 87DE Program (PRC) 000B88 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2087EE4007-001 Quantity: 0 Amount: (b)(4) Percent: 0 Subject To Funding: N Payment Address: Continued ...				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00001PAGE OF
3 4

NAME OF OFFEROR OR CONTRACTOR

ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 09/18/2020 All other terms and conditions remain unchanged				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 6	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00002		See Block 16C		See Schedule			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
ESS GROUP, INC. Attn: ROBERT ERICKSON 10 HEMINGWAY DR # 2 RIVERSIDE RI 02915							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-16-006			
				68HERC19F0290			
				10B. DATED (SEE ITEM 13)			
				09/19/2019			
CODE 019131986		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				(b)(4)			
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) FAR 52.243-2; FAR 52.249-14; EPAAR 1552.217-71						
E. IMPORTANT: Contractor <input type="checkbox"/> is not <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 019131986							
The purpose of this Modification is to:							
1. Exercise Option Period 1 and fully fund Option Period 1 in the amount of (b)(4) 2. Obligate incremental funding in the amount of (b)(4) on Option Period 1, which fully funds Option Period 1; 3. Revise the Performance Work Statement to extend the Period of Performance for Option Period 1 to 04/18/2021 at no additional cost to the government due to excused delays related to the Covid 19 pandemic, in accordance with Attachment 1, Revised Performance Work Statement; and 4. Revise G-2 Local Clauses EPA-G-42-101 Contract Administration Representatives clause.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Sandra Stargardt-Licis			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				ELECTRONIC SIGNATURE		06/15/2020	
				(Signature of Contracting Officer)			

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00002PAGE OF
2 6NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>TOCOR: Brian Topping Max Expire Date: 04/18/2021 InvoiceApprover: Brian Topping Alt Invoice App: Damaris Christensen LIST OF CHANGES:</p> <p>Reason for Modification: Exercise an Option Period Of Performance End Date changed from 18-SEP-20 to 18-APR-21 Total Amount for this Modification: \$0.00 New Total Amount for this Version: (b)(4) New Total Amount for this Award: (b)(4) Obligated Amount for this Modification: (b)(4) New Total Obligated Amount for this Award: (b)(4)</p> <p>Maximum Potential Expiration Date changed to : 04/18/2021 CHANGES FOR LINE ITEM NUMBER: 2 Obligated Amount for this Modification: (b)(4) End Date changed from 19-JAN-21 to 18-APR-21 Exercised option</p> <p>CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Delivery Date changed from 01/19/2021 to 04/18/2021</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 19-20-B-08WCO20-000BE2-2505-2008WWW802-001 Beginning FiscalYear 19 Ending Fiscal Year 20 Fund (Appropriation) B Budget Organization 08WCO20 Program (PRC) 000BE2 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2008WWW802-001 Quantity: 0 Amount: (b)(4) Percent: (b)(4) Subject To Funding: N Payment Address:</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 20-21-B-87DE-000B88-2505-2087EE4011-001 Continued ...</p>				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00002PAGE OF
3 6NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) B Budget Organization 87DE Program (PRC) 000B88 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2087EE4011-001 Quantity: 0 Amount: (b)(4) Percent: 0 Subject To Funding: N Payment Address: NEW ACCOUNTING CODE ADDED: Account code: 19-20-B-08WCO20-000B53-2505-2008WWW802-002 Beginning FiscalYear 19 Ending Fiscal Year 20 Fund (Appropriation) B Budget Organization 08WCO20 Program (PRC) 000B53 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2008WWW802-002 Quantity: 0 Amount: (b)(4) Percent: (b)(4) Subject To Funding: N Payment Address: NEW ACCOUNTING CODE ADDED: Account code: 19-20-B-08WCO20-000BD4-2505-2008WWW802-003 Beginning FiscalYear 19 Ending Fiscal Year 20 Fund (Appropriation) B Budget Organization 08WCO20 Program (PRC) 000BD4 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2008WWW802-003 Quantity: 0 Amount: (b)(4) Percent: (b)(4) Continued ...				

CONTINUATION SHEET

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4 6NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Subject To Funding: N Payment Address: NEW ACCOUNTING CODE ADDED: Account code: 19-20-B-87DE-000BD4-2505-2087EE4011-002 Beginning FiscalYear 19 Ending Fiscal Year 20 Fund (Appropriation) B Budget Organization 87DE Program (PRC) 000BD4 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2087EE4011-002 Quantity: 0 Amount: (b)(4) Percent: (b)(4) Subject To Funding: N Payment Address: Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 04/18/2021 . All other terms and conditions remain unchanged.				

PERFORMANCE WORK STATEMENT
Technical Support for National Aquatic Resource Survey
TASK ORDER: 68HERC19F0290 - Modification 1

A. TITLE: Development of Streamflow Duration Assessment Methods: Field Sampling for the Northern Plains and Southern Plains Regions (SDAM-NP-SP)

B. EPA PERSONNEL

Task Order Contracting Officer Representative (TOCOR):

Name: **Brian Topping**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Freshwater and Marine Regulatory Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
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E-mail: topping.brian@epa.gov

Alternate Task Order Contracting Officer Representative (ALT - TOCOR):

Name: **Damaris Christensen**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Program Development and Jurisdiction Branch
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E-mail: christensen.damaris@epa.gov

C. ESTIMATED PERIOD OF PERFORMANCE

Base Period: September 19, 2019 through September 18, 2020
Option Period: September 19, 2020 through April 18, 2021

D. TYPE OF TASK ORDER: Cost plus Fixed Fee (CPFF)

I. BACKGROUND:

The Clean Water Act (CWA) Section 404 regulatory program permits a wide range of projects which impact waters of the United States. Under CWA Section 404 the US Army Corps of Engineers (Corps), or states who have assumed the permit program, issue the permits in compliance with regulations established by the Environmental Protection Agency (EPA). EPA reviews public notices for proposed projects and policies, approves assumption of permit programs, and works with the Corps and states on ways to enhance the efficiency and effectiveness of 404 programmatic implementation.

One of the key components in implementing the 404 regulatory program is to conduct jurisdictional determinations to identify what type of water bodies are present on a project site and whether those waterbodies are regulated under the CWA. Determining the jurisdictional status of stream channels often requires the ability to identify whether the flow duration of the stream in question is perennial, intermittent, or ephemeral. However, long-term hydrologic data to assess streamflow duration are limited, especially for intermittent and ephemeral streams; and regulators need a site-specific rapid method for determining streamflow duration at sites where long-term hydrologic data are not available.

Streamflow duration assessment methods (SDAMs) are rapid field-based assessment tools that utilize physical, hydrological, and biological indicators to determine the flow duration of streams (i.e., perennial, intermittent, or ephemeral) and are one type of tool that could be relied on to effectively conduct jurisdictional determinations for streams under section 404 of the CWA. Currently, the Pacific Northwest (PNW) region has an approved SDAM developed and used by EPA, the Corps, and the States of Oregon, Washington, and Idaho since 2015. The Streamflow Duration Assessment Method for the Pacific Northwest can be found here: <https://www.epa.gov/measurements/streamflow-duration-assessment-method-pacific-northwest>. Additionally, over the past couple of years the EPA has been working with the US Army Corps of Engineers Corps to develop regional SDAMs for use throughout the Arid Southwest (ASW) and Western Mountains (WM) regions.

The focus of this task is to support the development of regional SDAMs for use throughout the Northern Plains (NP) and Southern Plains (SP) regions. The process of developing a streamflow duration assessment method involves six key steps: preparation, baseline site data collection, validation study, data analysis and method development, rollout, and continuous baseline sampling (Table 1). The work under this Task Order (TO) will focus specifically on conducting the field sampling and data collection necessary to carry out the baseline and validation study steps of the method development process. This task will build on the existing work that has been conducted in the PNW, ASW, and WM regions, testing the performance of existing assessment methods and flow duration indicators in order to develop methods specific to the NP and SP regions. The NP and SP regions as used in this TO are defined as all or parts of Montana, Wyoming, North Dakota, South Dakota, Minnesota, Wisconsin, Michigan, Illinois, Iowa, Nebraska, Kansas, Missouri, Oklahoma, Colorado, New Mexico, and Texas found in the Northern Plains or Southern Plains regions as identified in the Corps Ordinary High Water Mark (OHWM) Scientific Support Document, found here: <https://erdc-library.erdc.dren.mil/xmlui/handle/11681/20650> (Figure 1).

Table 1. Description of the six steps involved in the method development process. The work under this TO is focused on the baseline data collection and validation study steps (highlighted in grey).

Process Step	Description
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Preparation	Literature review, identification and evaluation of potential hydrologic data sources, and coordination with state, federal, and academic partners to identify regionally specific indicators of flow duration and select sites for baseline data collection and validation studies.
Baseline data collection	Instrumentation of sites for a minimum of one year to confirm “true” flow duration, with at least three site visits to collect streamflow indicator data during this time. Baseline sites will include at least one case study to sample multiple sites within the same watershed, along the flow duration gradient, which will allow for exploration of questions related to the spatial and temporal variability of flow. (10% of baseline sites install redundant instrumentation (2 loggers))
Validation study	Collection of streamflow indicator data at sites with known flow duration across the region. Validation study sites are independent of the baseline sites. (10% of validation sites resampled)
Method development	Data analysis to develop a regionally specific method. This step also includes internal peer-review and interagency agreement prior to release of the interim method.
Rollout	Engagement with stakeholders on the method, as well as technical support and training for staff. This step also includes a one-year comment period on the interim method, an external peer-review, and any final revisions.
Continuous baseline sampling	Instrumentation is maintained at all baseline sites and data collection continues on an annual basis to ensure that method development was not biased by interannual climatic and streamflow variation.

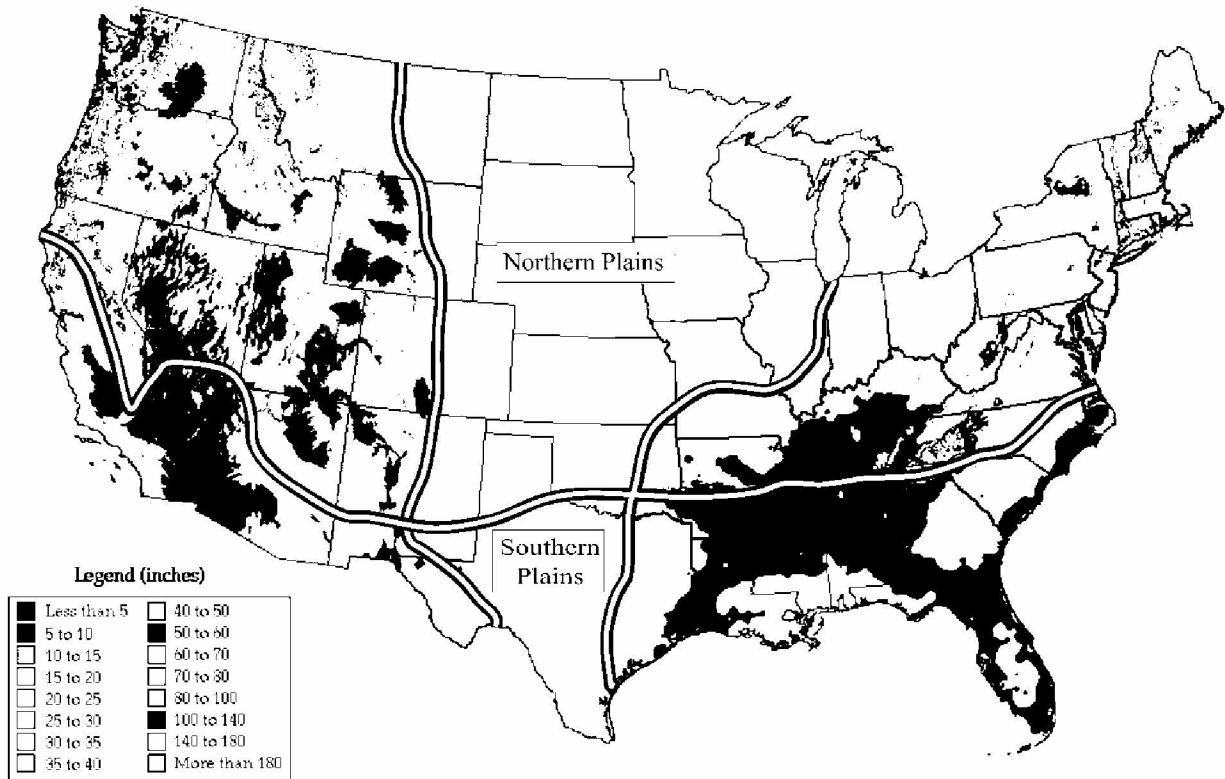


Figure 1. Map of regions identified in the US Army Corps of Engineers Ordinary High Water Mark (OHWM) Scientific Support Document. The Northern Plains (NP) region and the Southern Plains (SP) region are labeled. (figure modified from Wohl et al., 2016).

For the purposes of the work under this TO, a stream can be described as a channel containing flowing surface water including:

- *stormflow* – increased streamflow resulting from the relatively rapid runoff of precipitation from the land as interflow (rapid, unsaturated, subsurface flow), overland flow, or saturated flow from surface water tables close to the stream channel, or;
- *baseflow* – flow resulting from ground water entering the stream or sustained melt water from glaciers and snowmelt (observed during long gaps between rainfall events), or;
- a combination of both stormflow and baseflow, and;
- contributions of discharge from upstream tributaries as stormflow or baseflow, if present.

*Note: For the purposes of this work the descriptor ‘stream’ is attached to the channel, and applies regardless of whether flow dries up seasonally or otherwise.

In this task, a stream is classified into one of three flow-duration classes:

- *Ephemeral* streams flow only in direct response to precipitation. Water typically flows only during and shortly after large precipitation events. Ephemeral streams may or may not have a well-defined channel, the streambed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and in some instances physical characteristics commonly associated with the continuous or intermittent conveyance of water.
- *Intermittent* streams are channels that contain water for only part of the year, typically during the rainy season, where the streambed may be below the water table and/or where the snowmelt from surrounding uplands provides sustained flow. The channel may or may not be well-defined. The flow may vary greatly with stormwater runoff. An intermittent stream may lack the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- *Perennial* streams contain water continuously during a year of normal rainfall, often with the streambed located below the water table for most of the year. Groundwater supplies the baseflow for perennial streams, but flow is also supplemented by stormwater runoff or snowmelt. A perennial stream typically exhibits the biological, hydrological, and physical characteristics commonly associated with the continued conveyance of water.

Duration, frequency, and timing of streamflow or drying, as well as flow magnitude, are fundamental properties of streams (Poff and Ward 1989; Winter et al. 1998) which can influence the structure and function of stream ecosystems (e.g., Chadwick and Huryn 2007; Fritz et al. 2008; Austin and Strauss 2011; Datry 2012). Watershed geology, climate, topography, soils, vegetation and human activities can all influence streamflow (Winter et al. 1998; Winter 2007). Water to support streams can originate from numerous sources within a watershed including overland flow from rainfall or snowmelt, shallow subsurface flow through the unsaturated zone, and ground-water discharge (Winter 2007).

As a stream flows from its origin, water may be derived primarily from stormflow, baseflow, or some combination of the two. Streams typically continue to accumulate water from stormflow, baseflow and other tributaries as they flow downstream. As streams accumulate flow they commonly transition along a gradient from ephemeral to intermittent and perennial, but sometimes quickly transition from ephemeral to perennial in high gradient systems, or transition from perennial to ephemeral or to total cessation of surface flow. Often these changes are gradual and may not be obvious to the casual observer. There are, however, indicators of streamflow that can be used to characterize the flow duration of a stream along a particular reach as ephemeral, intermittent or perennial. In the TO, duration encompasses the concept of the cumulative time period of flow over the course of a year, which may vary interannually with climate, groundwater withdrawal or streamflow diversion, and other water use patterns.

This TO is part of a larger effort focused on identifying and testing the methods and indicators available to rapidly identify stream flow duration of any stream reach in a single site visit.

Work under this TO requires expertise in field sampling and assessment methodology for headwater stream systems including techniques to measure and characterize various geomorphological, hydrological, and biological metrics such as channel dimension and structure, hydric soil indicators, hydrophytic plant identification, and aquatic macroinvertebrate identification. The work conducted under this TO will be supported by a Steering Committee (SC) comprised of staff from EPA Headquarters, Regions and Office of Research and Development, staff from the local Corps Districts, the Corps Engineer Research and Development Center (ERDC), and other EPA designees.

EPA will lead development of an overarching quality assurance project plan (QAPP) for flow duration method development that will cover all activities under this task.

II. PURPOSE

The purpose of this TO is to provide field sampling support for the development of regional SDAMs for use throughout the Northern Plains (NP) and Southern Plains (SP) regions. The work under this TO will focus specifically on conducting the field sampling and data collection necessary to carry out the baseline and validation study steps of the method development process. In particular, the contractor will schedule and deploy field crews to collect data at selected streams. The contract field crews shall adhere to strict quality assurance and quality control (QA/QC) requirements, including attendance at the SDAM training session; use of appropriate supplies and equipment; and adherence to data reporting requirements and deadlines.

III. GOVERNMENT FURNISHED INFORMATION

The EPA TOCOR will provide the following references via email as they become available.

- Reference 1: SDAM-NP-SP Quality Assurance Project Plan (QAPP)
- Reference 2: SDAM-NP-SP Field Protocol (FP)
- Reference 3: SDAM-NP-SP Field Data Sheets
- Reference 4: SDAM-NP-SP Baseline and Validation Sites
- Reference 5: STIC Data Logger Protocol
- Reference 6: Standard Operating Procedure (SOP) for Processing Benthic Macroinvertebrates (BMI)

As they become available, the EPA TOCOR will provide the contractor with revisions of relevant documents, including the QAPP and Field Protocol, and any other information deemed necessary for the contractor to provide the support for the Performance Work Statement (PWS).

During the period of performance, EPA will provide the contractor with:

- Training for the contractor's field crews in the fall of 2019.
- Assistance visits for the field crews in the fall of 2019

IV. GENERAL REQUIREMENTS

In providing support under the tasks described in Section V, the contractor also shall adhere to the following general requirements:

1. Deliverables (see Contract PWS B.1)

Memoranda shall be placed on company letterhead and the subject line shall include the phrase "EPA Contract EP-C-16-006". When transmitting deliverables by email, subject headers should include the contract, task order, and deliverable description (e.g., "EP-C-16-006 TO 68HERC19F0290: QAPP Signature Pages").

All electronic files shall be clearly named using the project abbreviation, a logical abbreviation for the name of the document (e.g., QAPP), the contractor name (abbreviated), and the date of edits to assist in version control (e.g., SDAM-NP-SP_QAPP_XX_YYYYMMDD). Proposed edits shall be provided in tracked changes in the original file format (e.g. MS Word). Final versions shall be provided to EPA in both the original format (e.g., Word, PowerPoint) and PDF versions (if necessary, EPA will modify the files to be Section 508 compliant).

Unless specified differently by the EPA TOCOR in written technical direction (per Contract Clause H.12), the contractor shall ensure that documentation is created using Agency standard software formats (e.g., Microsoft Office) to facilitate EPA use and review.

2. Meetings (see Contract PWS Clause B.2)

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

3. The contractor shall follow the provision of EPA prescription 1523.703-1, *acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting /conference services on behalf of the Agency. No single event under this TO is anticipated to exceed \$20,000. The contractor shall immediately notify the EPA Contracting Officer, PO and TOCOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audio visual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays

for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

4. As required, the TOCOR shall provide technical direction in accordance with Clause H-12 of the contract, EPAAR 1552.237-71 TECHNICAL DIRECTION (AUG 2009) and the Contract Level PWS. Any changes in cost or scope must be approved in writing by the contracting officer.

5. Government Furnished Property (GFP): There will be no GFP provided to the contractor during the performance of this task order. In accordance with FAR 45.102, the contractor shall be required to furnish all property necessary to perform this Task Order. This Task Order does not include the provision of contractor acquired property.

V. SCOPE OF WORK

Task 1. Monthly progress reports (See Contract Attachment 2 and 3; PWS B.2)

The contractor shall manage the Task Order (TO) and submit monthly progress and financial reports prepared and submitted in accordance with the contract clause, Attachment 2, Reports of Work. The monthly progress and financial reports shall be broken out by task. The monthly progress report shall include project status, number of sites sampled (current and cumulative), identify sites sampled during the reporting period, unexpected problems or concerns, lessons learned, quality assurance/ quality control (QA/QC) activities, and next steps. The contractor also shall brief the TOCOR on progress during periodic (e.g., weekly) teleconferences during periods of intense activity.

Deliverables and Schedule under Task 1:

Task	Deliverable	Due
1	Progress and financial reports	Monthly
	Calls with EPA	Per written technical direction by the TOCOR (per Contract Clause H.12)

Task 2. Quality Assurance (Contract PWS B.3)

Quality Assurance (QA) is an important component of EPA's work to assure that minimum quality standards are attained. The contractor shall address the QA requirements of this task order by adhering to the requirements and procedures identified in:

- The contractor's customized Quality Management Plan incorporated into this contract;

- SDAM-NP-SP QA documents which document how quality assurance and quality control will be applied to the collection of environmental data for the survey. The documents relevant to support in this task order are:
 - SDAM-NP-SP Quality Assurance Project Plan (QAPP)
 - SDAM-NP-SP Field Protocol (FP)

The SDAM-NP-SP QA documents may evolve throughout the task order. The contractor shall notify the EPA TOCOR immediately if it identifies areas where its previous activities are not consistent with the revisions made to the QAPP and FP. The EPA TOCOR will determine whether any modifications to the contractor's previous activities will be necessary, which may require a modification to the task order by the EPA Contracting Officer (CO).

- a. As demonstration of the contractor's commitment to adhere to the SDAM-NP-SP QAPP, the contractor shall:
 - Ensure that all sampling personnel have reviewed and understand the requirements and procedures of the SDAM-NP-SP QAPP, and the SDAM-NP-SP Field Protocol FP which will be available prior to the field crew training sessions. The certification page entitled "Review & Distribution Acknowledgment and Commitment to Implement" is located in the introductory section of the QAPP.
 - At a minimum, the following personnel shall sign the certification page for the QAPP approved by EPA's Quality Assurance Officer (QAO):
 - Contractor's Task Order Leader
 - Contractor's Quality Assurance Officer,
 - **Each crew leader must provide the signed certification page before the crew may commence with sampling events.**
 - At the contractor's discretion, it may also be appropriate for each field crew member to sign the certification page and transmit to EPA.
 - The contractor's QAO also shall sign the certification page for each revision of the QAPP that has been approved by EPA's QAO.
 - If EPA distributes updated versions of the QA documents and states that it contains a "significant change" relevant to field sampling, the contractor shall acknowledge, in writing (e.g., Email), that it has received and distributed the revised QA documents to the appropriate personnel. If any change will impact the scope and/or cost of the task order, the contractor shall notify the TOCOR and CO immediately.
- b. **The contractor shall assign only staff who are Key Personnel (EPAAR 1552.237-72) to be field crew leaders (Tasks 6, 7, and 8) and ensure that the other field crew members have proper experience, field training, and acceptable educational credentials.** At a minimum, each proposed field crew leader shall have at least three years of experience in leading field crews; and at least three years of experience in conducting physical habitat assessments, hydrophytic plant identification, hydric soil identification, hydrologic monitoring of sites, and aquatic macroinvertebrate field identification. All field crew leaders shall also:

- i. **Complete the SDAM-NP-SP training requirements per Task 3.**
 - ii. Perform pre-sampling (i.e., in-office) testing of hardcopy and electronic field forms.
 - iii. **Verify that contractor's equipment (e.g., GPS system) is properly calibrated and maintained.**
 - iv. Permit EPA to perform an Assistance Visit (AV) of its field crews during an early sampling event (e.g., the first to fourteenth sampling event by a crew). If a field crew leader oversees more than one crew, EPA will determine if it is necessary to visit each crew or whether fewer visits will meet its quality review objectives (e.g., depending on crew composition, the crews might be viewed as essentially the same). The contractor shall coordinate with EPA, or its designee, on an agreed upon date and location for the AV. EPA, or its designee, will conduct the AV using a checklist provided by EPA, supplemented by photographs if appropriate (e.g., to record a deviation in methods due to extenuating circumstances). Although EPA will arrange for the AVs, it is the contractor's responsibility to ensure that the contractor field crews are abiding by the requirements and procedures of the QAPP and FP at all assigned sites.
- c. As demonstration of the contractor's implementation of QA in performing the other tasks in this PWS, the contractor shall document its QA activities as follows:
- i. Reports of relevant QA activities in any deliverable. All QA documentation prepared under the task order shall be considered non-proprietary, except for the internal distribution list which may be claimed proprietary.
 - ii. Monthly reports of QA activities performed during implementation of this task order. These monthly QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the SDAM-NP-SP QAPP, and corrective actions taken. The contractor shall include the QA report with the monthly progress report. In addition, the contractor shall immediately bring to the attention of the TOCOR any QA problems that may affect the conduct of the tasks or the project, with recommendations for corrective actions.
- d. As demonstration of the contractor's commitment to continuous quality improvements, the contractor shall provide summaries of "lessons learned" based upon its support to the other tasks. EPA will use this information to improve future development of flow duration assessment methods for streams. The contractor shall incorporate EPA comments into revised versions.

Deliverables and Schedule under Task 2:

Task	Deliverable	Due
2.a	Signature page for each version of QAPP approved by EPA's QAO:	

Task	Deliverable	Due
	<ul style="list-style-type: none"> - With contractor's QAO and Task Order Leader signatures. - With crew leader signature 	<ul style="list-style-type: none"> - No later than 5 working days after receiving the approved QAPP with EPA QAO's signature - At training
	Email acknowledgement of Field Protocol (FP) with "significant change"	No later than 10 working days after receiving revised FP
2.b	Memo with qualifications of field crew members, other than the field crew leaders	With first draft of the schedule for field crews in each season. Unless circumstances change unexpectedly, qualifications of replacements, except key personnel, must be submitted at least one week prior to the sampling event. See key personnel clause for process for replacements through a task order modification.
2b.ii	Email with outcome of testing field forms with any recommended changes	5 working days after receiving the first electronic/paper version of field forms. 1-5 working days after receiving subsequent versions, depending on extent of revision and schedule implications.
2.b.iii	Access to contractor's calibration and maintenance records	Within 5 working days after receiving written technical direction from the TOCOR (per Contract Clause H.12)
2.b.iv	Allow access for EPA or its designee to conduct an assistance visit to each field crew	Per written technical direction from the TOCOR (per Contract Clause H.12), based upon scheduling discussions occurring prior to each crews first sampling event
2.c.i	Documentation of QA activities	In deliverables
2.c.ii	Monthly reports of QA activities and immediate notice as needed	With monthly progress report and immediate notice as needed
2.d	Memorandum 1 with lessons learned for baseline data collection	Within 20 days from the end of the first sampling season. Revisions within 5 work days.
	Memorandum 2 with lessons learned for baseline and validation data collections	Within 30 days from the end of the last sampling event. Revisions within 5 work days.

Task 3. Field Training (Contract PWS C.1.g)

EPA and our designees will host at least one two day training session as soon as one month after award. This training will be at a location in the NP or SP region, use Kansas City, MO for cost estimation purposes. This training course will provide participants with training on the previously developed study design and to conduct baseline sampling according to the approved field protocol, an example of which can be found in PWS Attachment 1. (Note: the field protocol to be implemented throughout this TO may be identical to the example found in Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) work completed under this TO in Tasks 6 or 7). The trainings will also cover instrumentation of sites with Stream Temperature, Intermittency, and Conductivity (STIC) data loggers (to be provided and maintained by the contractor), as well as resampling, data retrieval, relaunching, and replacement (*see* PWS Attachment 2). The training will include one 2-hour webinar (e.g., overview and forms) and a 2 day in-person training including classroom and field training. It is preferable that all crew members participate in training activities, but at a minimum the contractor shall ensure that each field crew leader participates in a training session unless the EPA TOCOR issues written technical direction (per Contract Clause H.12). The contractor shall be responsible for maintaining records of training for all field crew leads and members in the project file, including names, dates, locations, and training description. The contractor shall report out, each month, on any associated training costs (e.g., travel, LOE, etc.) broken out by training using the template provided by the EPA TOCOR.

Deliverables and Schedule under Task 3:

Task	Deliverable	Due
3	Attend training webinar and class	As soon as one month after award
3	Maintain Training Record	As trainings occur
3	Report out on costs associated with attending EPA SDAM-NP-SP trainings	With monthly progress report

Task 4. Schedule (See Contract PWS C.2)

One purpose of the field sampling schedule is to ensure that the contractor will sample sites steadily during each sampling season (see Tasks 6, 7, and 8). Prior to the start of each season, EPA will provide the contractor with the list of sites to be sampled (unless the sampling is a follow-up visit to baseline sites), along with any details regarding priorities that must be taken into account in establishing the schedule (e.g., order of sampling for a specific season). As needed, the TOCOR shall issue written technical direction related to this information. Before the

start of each field season, the contractor shall provide EPA with the first draft with tentative sampling dates and crew assignments for all sites to be sampled that season. Throughout the season, the contractor shall revise the schedule to incorporate the EPA TOCOR's written technical direction (per Contract Clause H.12) or mitigating factors, including, but not limited to, weather, field crew changes, and unanticipated delays.

- a. Baseline site sampling schedule
- b. Baseline site first revisit schedule
- c. Baseline site second revisit and validation site sampling schedule
- d. For any site, if upon arrival on location, the contractor finds that conditions are not appropriate for sampling (i.e. the stream no longer exists), the contractor shall discontinue sampling and notify the EPA TOCOR that a replacement site is necessary. The contractor shall revise the schedule to include the new site.

Deliverables and Schedule under Task 4:

Task	Deliverable	Due
4.a	First draft of baseline site sampling schedule	First draft due within one week of receipt of site list. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.b	First draft of baseline site revisit schedule	First draft due within one month of the completion of baseline site sampling. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.c	First draft of baseline site and validation site sampling schedule	First draft due within three weeks of receipt of the validation site list. Revisions per written technical direction by the TOCOR (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.d	Notification of site conditions	As soon as possible per availability of phone or email access.

Task 5. Preparation for Field Sampling (See Contract PWS C.1)

The contractor shall prepare for field sampling visits as follows:

- a. The contractor shall be responsible for providing consumable materials as described in the QAPP and the Field Protocol. These materials include but are not limited to paper copies of field sheets, sampling containers, and consumable sampling equipment (e.g., paper towels, falcon tubes (filled with 70% ethanol), plastic bags).

- b. The contractor shall arrange for and supply vehicles, staff, and all other necessary non-consumable equipment to the field crews including, but not limited to, STIC data loggers, kicknets, field guides, clinometers, tape measurers, densimeters, and GPS devices.

Deliverables and Schedule under Task 5:

Task	Deliverable	Due
5.a	Consumable supplies	During field sampling visits
5.b	Supply equipment	During field sampling visits

Task 6. Initial Field Sampling Visits for Baseline Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 180 baseline sites across the NP and SP regions. The sites, which will be preselected by the steering committee, will be spread across the NP and SP regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more sites per day. During the initial site visit the contractor will conduct the approved sampling methodology, as well as deploy STIC loggers (to be provided and maintained by the contractor) at each site using the protocol found in PWS Attachment 2 - Stream Temperature, Intermittency, and Conductivity (STIC) Data Loggers Protocol. At 10% of the sites two STIC loggers will be deployed. The field protocol to be implemented under this Task may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, or 2) preparation work for the NP and SP regions. Water samples will not be collected as part of the protocol; however, voucher specimens will be collected to confirm identification (*see* PWS Attachment 1). When voucher specimens are needed, sample handling will be conducted in accordance with the QAPP and Field Protocol. Voucher specimens will be identified in the laboratory in accordance with the SOP for Processing BMI. Data will be entered onto paper data sheets (or a directly into a digital template, if available), and data sheets / digital template will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for

confirmation of identities) will be conducted in accordance with the QAPP.

a. Instrumentation and initial baseline site visits for the combined NP and SP region

Following the site selection and approval of the sampling protocol by the steering committee, the contractor will oversee equipment installation and initial data collection for at least 180 baseline sites in the combined NP and SP region. Data collection, along with data entry and QA activities shall be completed within the first 3 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 6:

Task	Deliverable	Due
6.a	Collect data, complete data entry, and QA activities for all 180 baseline sites in the combined NP and SP regions	Within 3 months of task order award

Task 7. Follow-Up Field Sampling Visits for Baseline Sites (See Contract PWS C.2)

The contractor will conduct at least two additional site visits for all baseline sites across the NP and SP regions to implement the approved study design and sampling methodology. Follow-up site visits should be planned so that over the span of one year, all baseline sites will be visited a total of three times across multiple seasons; ideally, intermittent sites will be visited during both the wet and dry phases. During the follow-up site visits the contractor will conduct the approved indicator sampling methodology and download STIC logger data using the protocol found in PWS Attachment 2. The field protocol to be implemented under this Task may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the technical steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) preliminary findings from work completed under Task Area 6 of this TO. Water samples will not be collected as part of the protocol; however, voucher specimens will be collected to confirm identification (*see* PWS Attachment 1). Where voucher specimens are needed, sample handling will be conducted in accordance with the QAPP and Field Protocol. Voucher specimens will be identified in the laboratory in accordance with the SOP for Processing BMI. Data will be entered onto paper data sheets (or a directly into a digital template), and data sheets / digital template will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into an Access database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Second site visit for the NP and SP regions

Using the approved study design and the sampling protocol, the contractor will conduct a second site visit for all baseline sites in the NP and SP region. Data collection for the second site visits, along with data entry and QA activities, shall be completed within 9 months of task order award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Third site visit for the NP and SP region (Option Period 1 activity)

Using the approved study design and the sampling protocol, the contractor will conduct a third site visit for all baseline sites in the NP and SP region. Data collection for the third site visits, along with data entry and QA activities, shall be completed within the base period or by the final date in option period 1, at which time the

contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 7:

Task	Deliverable	Due
7.a	Collect data, complete data entry, and QA activities for all 180 baseline sites in the NP and SP region	Within 9 months of task order award
7.b	Collect data, complete data entry, and QA activities for all 180 baseline sites in the NP and SP region	Within the base period or by the final date in option period 1

Task 8. Field Sampling Visits for Validation Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 110 validation sites across the NP and SP regions with 10% identified as resample sites (total of 121 sampling events). The sites, which will be preselected by the technical steering committee, will be spread across the NP and SP regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more than sites per day. During the site visit the contractor will conduct the approved sampling methodology. The field protocol to be implemented under this Task Area may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) preliminary findings from work completed under Tasks 6 and 7 of this TO. Water samples will not be collected as part of the protocol; however, voucher specimens will be collected to confirm identification (*see* PWS Attachment 1). When voucher specimens are needed, sample handling will be conducted in accordance with the QAPP and Field Protocol. Voucher specimens will be identified in the laboratory in accordance with the SOP for Processing BMI. Data will be entered onto paper data sheets (or a directly into a digital template), and data sheets or digital template will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Validation study for the NP and SP region

Following the site selection and approval of the sampling protocol by the technical steering committee, the contractor will oversee data collection for at least 110 validation sites in the NP and SP region. Data collection, along with data entry and QA activities shall be completed within the first 12 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 8:

Task	Deliverable	Due
8.a	Collect data, complete data entry, and QA activities for all 110 validation sites (121 sampling events) in the NP and SP region	Within 12 months of task order award

Task 9. Post-Sampling Activities (See Contract PWS C.2)

The contractor shall make field crews available to respond to EPA's post-sampling questions about the field sampling observations and procedures that might affect the data values and quality. If questions come from sources other than the EPA TOCOR (e.g., Other contractors working on this project), copy the EPA TOCOR on the email response or provide a summary by email (e.g., if the questions were posed through telephone conversations).

Unless the TOCOR grants an exception in accordance with agency procedures, the contractor shall refrain from publishing findings based upon work conducted under this task order. This restriction shall remain in effect until EPA provides public access to the data.

Deliverables and Schedule under Task 9:

Task	Deliverable	Due
9	Email responding to data questions	Within 5 working days, if field crew is available. Otherwise, provide email within 5 days with expected response date.

VI. TRAVEL

This section provides a summary of the travel requirements described in Section V. Assume each field crew contains 2 or more members, one of which is a crew leader. Here are assumptions to use in costing:

Task V.3 (Training) –

- All crew leaders, other key personnel and crew members attend a two day EPA coordinated training prior to starting field sampling. (Training location(s) will be within the NP and/or SP regions – Kansas City, MO can be used cost estimation; however, actual training location(s) selected after award may differ from those used in this costing.)

Task V.6, 7, and 8 (Sampling) –

- For every site, one field crew of 2 or more members travel to the site
- Total of 661 site visits identified in Tasks 6, 7, and 8.
- Travel costs are minimized to the extent possible (e.g., combining nearby sites into one trip for the same crew).

VII. Quality Assurance Surveillance Plan (QASP)

EPA will judge performance using the following Quality Assurance Surveillance Plan (QASP).

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
<p>Management and Communications:</p> <p>The Contractor shall maintain contact with the EPA TOCOR throughout the performance of the task order and shall immediately bring potential problems to the attention of the EPA TOCOR. In cases where issues have a direct impact on field sampling activities, project schedules (i.e., not each sampling event), cost, time, or quality, the contractor shall provide options for EPA's consideration on resolving the issues or mitigating their impacts.</p>	<p>Any issue adversely impacting project schedules, cost, time or quality shall be brought to the attention of the EPA TOCOR:</p> <p>i) If the contractor requires EPA guidance during a sampling event, the contractor must contact EPA prior to completing the sampling activities.</p> <p>ii) If the contractor identifies an issue that could affect multiple crews, the contractor shall contact EPA that day so that direction can be provided to all crews in the field.</p> <p>iii) If the contractor identifies sampling issues that are otherwise not urgent, the contractor shall contact EPA within 5 working days.</p>	<p>EPA TOCOR will identify unreported issues.</p>	<p>Four or more incidents where the contractor:</p> <ul style="list-style-type: none"> Does not provide timely notification; or Created a severe adverse situation <p>will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p> <p>Fewer than four incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p>
<p>Timeliness:</p> <p>Completed field sampling data forms and data shall be delivered in accordance with the requirements of the QAPP.</p>	<p>No more than 10% of the database entry and field sampling forms shall be submitted more than 5 working days past the requirements in the QAPP. If the field form or database entry has not been completed correctly, it will be considered a failure of timeliness.</p>	<p>Delivery for 100% of the database entry and field forms will be tracked by the EPA TOCOR and compared against the requirements in the QAPP.</p>	<p>10 or more incidents where the contractor does not meet the measurable performance will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Schedule.</p> <p>Fewer than ten incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System.</p>
<p>Cost Management and Control:</p> <p>The Contractor shall monitor, track, and accurately report cost and</p>	<p>The contractor shall manage costs to the level of approved ceiling on the task order. The contractor shall notify the TOCOR, PO and CO when 75% of the</p>	<p>The TOCOR will compare actual versus projected expenditures on a monthly basis (via meetings, monthly progress reports &</p>	<p>Unsatisfactory rating under the category of Cost Control in CPARS when the contractor does not meet the</p>

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
fee expenditures to EPA through progress reports and approved special reporting requirements. The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate cost control.	approved funding ceiling for the task order is reached.	milestones established for each deliverable).	measurable performance standards. An acceptable rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the measurable performance standards and accurately reports the costs.
Technical Effort: The Contractor shall assign appropriately leveled and skilled personnel to all tasks; and abide by the contractor's QMP, the field protocol, and QAPP.	No more than 25% of reviewed deliverables and data shall require revisions to meet the requirements. All of the assigned staff must meet the requirements in the field protocol, and QAPP.	100% of the data and staffing will be reviewed by the EPA TOCOR to identify noncompliance issues.	Unsatisfactory rating under the category of Quality in CPARS when the contractor does not meet the measurable performance standards during an applicable period of performance.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. P00003		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001		CODE CAD		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) ESS GROUP, INC. Attn: ROBERT ERICKSON 10 HEMINGWAY DR # 2 RIVERSIDE RI 02915				(X)		9A. AMENDMENT OF SOLICITATION NO.	
				X		9B. DATED (SEE ITEM 11)	
						10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-16-006 68HERC19F0290	
						10B. DATED (SEE ITEM 13) 09/19/2019	
CODE 019131986		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
	D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) DUNS Number: 019131986 TOCOR: Brian Topping Max Expire Date: 04/18/2021 Invoice Approver: Brian Topping Alt Invoice App: Damaris Christensen LIST OF CHANGES: Reason for Modification: Other Administrative Action Section I: Clause titled "Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (AUG 2020)" is incorporated by reference. Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (AUG 2020) Continued ... Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Sandra Stargardt-Licis			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				ELECTRONIC SIGNATURE (Signature of Contracting Officer)		08/31/2020	

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00003PAGE OF
2 2

NAME OF OFFEROR OR CONTRACTOR

ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>The purpose of this modification is to incorporate the attached EPA blanket administrative modification signed by Raoul Scott on July 30, 2020. All other terms and conditions remain unchanged.</p> <p>Payment:</p> <p>RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Period of Performance: 09/19/2019 to 04/18/2021</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE	OF	PAGES
2. AMENDMENT/MODIFICATION NUMBER		3. EFFECTIVE DATE 08/13/2020	4. REQUISITION/PURCHASE REQUISITION NUMBER		5. PROJECT NUMBER (If applicable)		
6. ISSUED BY Raoul D. Scott, Director OMS/ARM/OAS/Policy, Training and Oversight Division US Environmental Protection Agency, Mail Code 3802R 1200 Pennsylvania Avenue, NW Washington, DC 20004		CODE	7. ADMINISTERED BY (If other than Item 6)		CODE		
8. NAME AND ADDRESS OF CONTRACTOR (Number, street, county, State and ZIP Code) To All EPA Contractors			<input checked="" type="checkbox"/> (X)		9A. AMENDMENT OF SOLICITATION NUMBER		
			<input type="checkbox"/>		9B. DATED (SEE ITEM 11)		
			<input checked="" type="checkbox"/> (X)		10A. MODIFICATION OF CONTRACT/ORDER NUMBER		
			<input checked="" type="checkbox"/> (X)		To all EPA Contracts and Orders		
CODE		FACILITY CODE		10B. DATED (SEE ITEM 13)			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;
 or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

This contract/order is being modified in accordance with the applicability instructions in interim FAR Case 2019-009, and FAR 4.2105, requiring contracting officers to include FAR clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

See attached for the full text version of FAR 52.204-25. Contractor Acknowledgment of receipt required.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Raoul D. Scott, Director Policy, Training and Oversight Division	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA RAOUL SCOTT Digitally signed by RAOUL SCOTT Date: 2020.07.30 11:40:17 -04'00'	16C. DATE SIGNED
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

Previous edition unusable

52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

As prescribed in 4.2105(b) and in the applicability instructions in interim FAR Case 2019-009, insert the following clause:

Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (Aug 2020)

(a) Definitions. As used in this clause—

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means—

(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);

(2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means—

(1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;

(2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled-

(i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or

(ii) For reasons relating to regional stability or surreptitious listening;

(3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);

(4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);

(5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) Prohibition. (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) *Exceptions.* This clause does not prohibit contractors from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at <https://dibnet.dod.mil>. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at <https://dibnet.dod.mil>.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause

(i) Within one business day from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts*. The Contractor shall insert the substance of this clause, including this paragraph (e) and excluding paragraph (b)(2), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.

(End of clause)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 4	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00004		See Block 16C		See Schedule			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
ESS GROUP, INC. Attn: ROBERT ERICKSON 10 HEMINGWAY DR # 2 RIVERSIDE RI 02915							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-16-006			
				68HERC19F0290			
				10B. DATED (SEE ITEM 13)			
				09/19/2019			
CODE 019131986		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
x	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Bilateral - Mutual Agreement of the Parties						
	D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input type="checkbox"/> is not <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 019131986							
The purpose of this modification is to: (1) Shift tasks from the Base Period to Option Period 1 in accordance with the revised Performance Work Statement, attached as Attachment 1, due to work being delayed because of travel restrictions resulting from the Covid 19 pandemic; and (2) Shift funds in the amount of (b)(4) from the Base Period to Option Period 1. This results in an (b)(4) total cost (b)(4) to Option Period 1. This also results in a (b)(4) (b)(4)							
TOCOR: Brian Topping Max Expire Date: 04/18/2021 Invoice Approver: Brian Topping Alt Invoice App: Damaris Christensen LIST OF CHANGES: Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Sandra Stargardt-Licis			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				ELECTRONIC SIGNATURE		09/11/2020	
				(Signature of Contracting Officer)			

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00004PAGE OF
2 4NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Reason for Modification: Supplemental Agreement for work within scope</p> <p>Total Amount for this Modification: \$0.00</p> <p>New Total Amount for this Version: (b)(4)</p> <p>New Total Amount for this Award: (b)(4)</p> <p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>(b)(4)</p> <p>Obligated Amount for this Modification: -\$38,950.00</p> <p>CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB</p> <p>(b)(4)</p> <p>CHANGES FOR ACCOUNTING CODE: 19-20-B-87DE-000B88-2505-1987EE9010-001</p> <p>Percent changed (b)(4)</p> <p>CHANGES FOR ACCOUNTING CODE: 20-21-B-87DE-000B88-2505-2087EE4007-001</p> <p>Amount (b)(4)</p> <p>Percent (b)(4)</p> <p>CHANGES FOR LINE ITEM NUMBER: 2</p> <p>Total Amount changed</p> <p>(b)(4)</p> <p>Obligated Amount for this Modification: (b)(4)</p> <p>CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB</p> <p>(b)(4)</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 20-21-B-87DE-000B88-2505-2087EE4007-001</p> <p>Beginning FiscalYear 20</p> <p>Ending Fiscal Year 21</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 87DE</p> <p>Program (PRC) 000B88</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 2087EE4007-001</p> <p>Quantity: 0</p> <p>Amount: (b)(4)</p> <p>Percent: (b)(4)</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p>Continued ...</p>				

NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 04/18/2021 All other terms and conditions remain unchanged.				

PERFORMANCE WORK STATEMENT
Technical Support for National Aquatic Resource Survey
TASK ORDER: 68HERC19F0290 - Modification 4

A. TITLE: Development of Streamflow Duration Assessment Methods: Field Sampling for the Northern Plains and Southern Plains Regions (SDAM-NP-SP)

B. EPA PERSONNEL

Task Order Contracting Officer Representative (TOCOR):

Name: **Brian Topping**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Freshwater and Marine Regulatory Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
Telephone: 202-262-5653
E-mail: topping.brian@epa.gov

Alternate Task Order Contracting Officer Representative (ALT - TOCOR):

Name: **Damaris Christensen**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Program Development and Jurisdiction Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
Telephone: 202-566-0371
E-mail: christensen.damaris@epa.gov

C. ESTIMATED PERIOD OF PERFORMANCE

Base Period: 12 months from Award
Option Period: 4 months from completion of Base period

D. TYPE OF TASK ORDER: Cost plus Fixed Fee (CPFF)

I. BACKGROUND:

The Clean Water Act (CWA) Section 404 regulatory program permits a wide range of projects which impact waters of the United States. Under CWA Section 404 the US Army Corps of Engineers (Corps), or states who have assumed the permit program, issue the permits in compliance with regulations established by the Environmental Protection Agency (EPA). EPA reviews public notices for proposed projects and policies, approves assumption of permit programs, and works with the Corps and states on ways to enhance the efficiency and effectiveness of 404 programmatic implementation.

One of the key components in implementing the 404 regulatory program is to conduct jurisdictional determinations to identify what type of water bodies are present on a project site and whether those waterbodies are regulated under the CWA. Determining the jurisdictional status of stream channels often requires the ability to identify whether the flow duration of the stream in question is perennial, intermittent, or ephemeral. However, long-term hydrologic data to assess streamflow duration are limited, especially for intermittent and ephemeral streams; and regulators need a site-specific rapid method for determining streamflow duration at sites where long-term hydrologic data are not available.

Streamflow duration assessment methods (SDAMs) are rapid field-based assessment tools that utilize physical, hydrological, and biological indicators to determine the flow duration of streams (i.e., perennial, intermittent, or ephemeral) and are one type of tool that could be relied on to effectively conduct jurisdictional determinations for streams under section 404 of the CWA. Currently, the Pacific Northwest (PNW) region has an approved SDAM developed and used by EPA, the Corps, and the States of Oregon, Washington, and Idaho since 2015. The Streamflow Duration Assessment Method for the Pacific Northwest can be found here: <https://www.epa.gov/measurements/streamflow-duration-assessment-method-pacific-northwest>. Additionally, over the past couple of years the EPA has been working with the US Army Corps of Engineers Corps to develop regional SDAMs for use throughout the Arid Southwest (ASW) and Western Mountains (WM) regions.

The focus of this task is to support the development of regional SDAMs for use throughout the Northern Plains (NP) and Southern Plains (SP) regions. The process of developing a streamflow duration assessment method involves six key steps: preparation, baseline site data collection, validation study, data analysis and method development, rollout, and continuous baseline sampling (Table 1). The work under this Task Order (TO) will focus specifically on conducting the field sampling and data collection necessary to carry out the baseline and validation study steps of the method development process. This task will build on the existing work that has been conducted in the PNW, ASW, and WM regions, testing the performance of existing assessment methods and flow duration indicators in order to develop methods specific to the NP and SP regions. The NP and SP regions as used in this TO are defined as all or parts of Montana, Wyoming, North Dakota, South Dakota, Minnesota, Wisconsin, Michigan, Illinois, Iowa, Nebraska, Kansas, Missouri, Oklahoma, Colorado, New Mexico, and Texas found in the Northern Plains or Southern Plains regions as identified in the Corps Ordinary High Water Mark (OHWM) Scientific Support Document, found here: <https://erdc-library.erdc.dren.mil/xmlui/handle/11681/20650> (Figure 1).

Table 1. Description of the six steps involved in the method development process. The work under this TO is focused on the baseline data collection and validation study steps (highlighted in grey).

Process Step	Description
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Preparation	Literature review, identification and evaluation of potential hydrologic data sources, and coordination with state, federal, and academic partners to identify regionally specific indicators of flow duration and select sites for baseline data collection and validation studies.
Baseline data collection	Instrumentation of sites for a minimum of one year to confirm “true” flow duration, with at least three site visits to collect streamflow indicator data during this time. Baseline sites will include at least one case study to sample multiple sites within the same watershed, along the flow duration gradient, which will allow for exploration of questions related to the spatial and temporal variability of flow. (10% of baseline sites install redundant instrumentation (2 loggers))
Validation study	Collection of streamflow indicator data at sites with known flow duration across the region. Validation study sites are independent of the baseline sites. (10% of validation sites resampled)
Method development	Data analysis to develop a regionally specific method. This step also includes internal peer-review and interagency agreement prior to release of the interim method.
Rollout	Engagement with stakeholders on the method, as well as technical support and training for staff. This step also includes a one-year comment period on the interim method, an external peer-review, and any final revisions.
Continuous baseline sampling	Instrumentation is maintained at all baseline sites and data collection continues on an annual basis to ensure that method development was not biased by interannual climatic and streamflow variation.

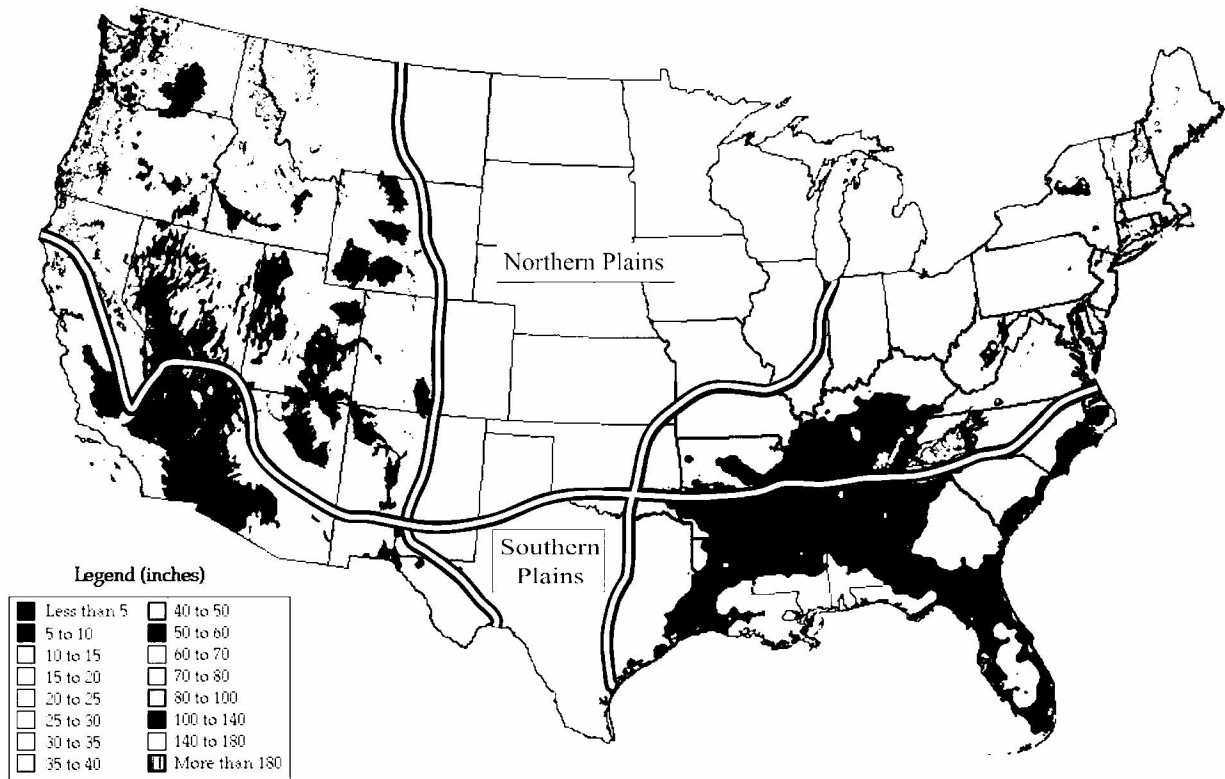


Figure 1. Map of regions identified in the US Army Corps of Engineers Ordinary High Water Mark (OHWM) Scientific Support Document. The Northern Plains (NP) region and the Southern Plains (SP) region are labeled. (figure modified from Wohl et al., 2016).

For the purposes of the work under this TO, a stream can be described as a channel containing flowing surface water including:

- stormflow – increased streamflow resulting from the relatively rapid runoff of precipitation from the land as interflow (rapid, unsaturated, subsurface flow), overland flow, or saturated flow from surface water tables close to the stream channel, or;
- baseflow – flow resulting from ground water entering the stream or sustained melt water from glaciers and snowmelt (observed during long gaps between rainfall events), or;
- a combination of both stormflow and baseflow, and;
- contributions of discharge from upstream tributaries as stormflow or baseflow, if present.

*Note: For the purposes of this work the descriptor ‘stream’ is attached to the channel, and applies regardless of whether flow dries up seasonally or otherwise.

In this task, a stream is classified into one of three flow-duration classes:

- Ephemeral streams flow only in direct response to precipitation. Water typically flows only during and shortly after large precipitation events. Ephemeral streams may or may not have a well-defined channel, the streambed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and in some instances physical characteristics commonly associated with the continuous or intermittent conveyance of water.
- Intermittent streams are channels that contain water for only part of the year, typically during the rainy season, where the streambed may be below the water table and/or where the snowmelt from surrounding uplands provides sustained flow. The channel may or may not be well-defined. The flow may vary greatly with stormwater runoff. An intermittent stream may lack the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- Perennial streams contain water continuously during a year of normal rainfall, often with the streambed located below the water table for most of the year. Groundwater supplies the baseflow for perennial streams, but flow is also supplemented by stormwater runoff or snowmelt. A perennial stream typically exhibits the biological, hydrological, and physical characteristics commonly associated with the continued conveyance of water.

Duration, frequency, and timing of streamflow or drying, as well as flow magnitude, are fundamental properties of streams (Poff and Ward 1989; Winter et al. 1998) which can influence the structure and function of stream ecosystems (e.g., Chadwick and Huryn 2007; Fritz et al. 2008; Austin and Strauss 2011; Datry 2012). Watershed geology, climate, topography, soils, vegetation and human activities can all influence streamflow (Winter et al. 1998; Winter 2007). Water to support streams can originate from numerous sources within a watershed including overland flow from rainfall or snowmelt, shallow subsurface flow through the unsaturated zone, and ground-water discharge (Winter 2007).

As a stream flows from its origin, water may be derived primarily from stormflow, baseflow, or some combination of the two. Streams typically continue to accumulate water from stormflow, baseflow and other tributaries as they flow downstream. As streams accumulate flow they commonly transition along a gradient from ephemeral to intermittent and perennial, but sometimes quickly transition from ephemeral to perennial in high gradient systems, or transition from perennial to ephemeral or to total cessation of surface flow. Often these changes are gradual and may not be obvious to the casual observer. There are, however, indicators of streamflow that can be used to characterize the flow duration of a stream along a particular reach as ephemeral, intermittent or perennial. In the TO, duration encompasses the concept of the cumulative time period of flow over the course of a year, which may vary interannually with climate, groundwater withdrawal or streamflow diversion, and other water use patterns.

This TO is part of a larger effort focused on identifying and testing the methods and indicators available to rapidly identify stream flow duration of any stream reach in a single site visit.

Work under this TO requires expertise in field sampling and assessment methodology for headwater stream systems including techniques to measure and characterize various geomorphological, hydrological, and biological metrics such as channel dimension and structure, hydric soil indicators, hydrophytic plant identification, and aquatic macroinvertebrate identification. The work conducted under this TO will be supported by a Steering Committee (SC) comprised of staff from EPA Headquarters, Regions and Office of Research and Development, staff from the local Corps Districts, the Corps Engineer Research and Development Center (ERDC), and other EPA designees.

EPA will lead development of an overarching quality assurance project plan (QAPP) for flow duration method development that will cover all activities under this task.

II. PURPOSE

The purpose of this TO is to provide field sampling support for the development of regional SDAMs for use throughout the Northern Plains (NP) and Southern Plains (SP) regions. The work under this TO will focus specifically on conducting the field sampling and data collection necessary to carry out the baseline and validation study steps of the method development process. In particular, the contractor will schedule and deploy field crews to collect data at selected streams. The contract field crews shall adhere to strict quality assurance and quality control (QA/QC) requirements, including attendance at the SDAM training session; use of appropriate supplies and equipment; and adherence to data reporting requirements and deadlines.

III. GOVERNMENT FURNISHED INFORMATION

The EPA TOCOR will provide the following references via email as they become available.

- Reference 1: SDAM-NP-SP Quality Assurance Project Plan (QAPP)
- Reference 2: SDAM-NP-SP Field Protocol (FP)
- Reference 3: SDAM-NP-SP Field Data Sheets
- Reference 4: SDAM-NP-SP Baseline and Validation Sites
- Reference 5: STIC Data Logger Protocol
- Reference 6: Standard Operating Procedure (SOP) for Processing Benthic Macroinvertebrates (BMI)

As they become available, the EPA TOCOR will provide the contractor with revisions of relevant documents, including the QAPP and Field Protocol, and any other information deemed necessary for the contractor to provide the support for the Performance Work Statement (PWS).

During the period of performance, EPA will provide the contractor with:

- Training for the contractor's field crews in the fall of 2019.
- Assistance visits for the field crews in the fall of 2019

IV. GENERAL REQUIREMENTS

In providing support under the tasks described in Section V, the contractor also shall adhere to the following general requirements:

1. Deliverables (see Contract PWS B.1)

Memoranda shall be placed on company letterhead and the subject line shall include the phrase "EPA Contract EP-C-16-006". When transmitting deliverables by email, subject headers should include the contract, task order, and deliverable description (e.g., "EP-C-16-006 TO 68HERC19F0290: QAPP Signature Pages").

All electronic files shall be clearly named using the project abbreviation, a logical abbreviation for the name of the document (e.g., QAPP), the contractor name (abbreviated), and the date of edits to assist in version control (e.g., SDAM-NP-SP_QAPP_XX_YYYYMMDD). Proposed edits shall be provided in tracked changes in the original file format (e.g. MS Word). Final versions shall be provided to EPA in both the original format (e.g., Word, PowerPoint) and PDF versions (if necessary, EPA will modify the files to be Section 508 compliant).

Unless specified differently by the EPA TOCOR in written technical direction (per Contract Clause H.12), the contractor shall ensure that documentation is created using Agency standard software formats (e.g., Microsoft Office) to facilitate EPA use and review.

2. Meetings (see Contract PWS Clause B.2)

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

3. The contractor shall follow the provision of EPA prescription 1523.703-1, acquisition of environmentally preferable meeting and conference services (May 2007), for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting /conference services on behalf of the Agency. No single event under this TO is anticipated to exceed \$20,000. The contractor shall immediately notify the EPA Contracting Officer, PO and TOCOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audio visual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays

for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

4. As required, the TOCOR shall provide technical direction in accordance with Clause H-12 of the contract, EPAAR 1552.237-71 TECHNICAL DIRECTION (AUG 2009) and the Contract Level PWS. Any changes in cost or scope must be approved in writing by the contracting officer.

5. Government Furnished Property (GFP): There will be no GFP provided to the contractor during the performance of this task order. In accordance with FAR 45.102, the contractor shall be required to furnish all property necessary to perform this Task Order. This Task Order does not include the provision of contractor acquired property.

V. SCOPE OF WORK

Task 1. Monthly progress reports (See Contract Attachment 2 and 3; PWS B.2)

The contractor shall manage the Task Order (TO) and submit monthly progress and financial reports prepared and submitted in accordance with the contract clause, Attachment 2, Reports of Work. The monthly progress and financial reports shall be broken out by task. The monthly progress report shall include project status, number of sites sampled (current and cumulative), identify sites sampled during the reporting period, unexpected problems or concerns, lessons learned, quality assurance/ quality control (QA/QC) activities, and next steps. The contractor also shall brief the TOCOR on progress during periodic (e.g., weekly) teleconferences during periods of intense activity.

Deliverables and Schedule under Task 1:

Task	Deliverable	Due
1	Progress and financial reports	Monthly
	Calls with EPA	Per written technical direction by the TOCOR (per Contract Clause H.12)

Task 2. Quality Assurance (Contract PWS B.3)

Quality Assurance (QA) is an important component of EPA's work to assure that minimum quality standards are attained. The contractor shall address the QA requirements of this task order by adhering to the requirements and procedures identified in:

- The contractor's customized Quality Management Plan incorporated into this contract;

- SDAM-NP-SP QA documents which document how quality assurance and quality control will be applied to the collection of environmental data for the survey. The documents relevant to support in this task order are:
- SDAM-NP-SP Quality Assurance Project Plan (QAPP)
 - SDAM-NP-SP Field Protocol (FP)

The SDAM-NP-SP QA documents may evolve throughout the task order. The contractor shall notify the EPA TOCOR immediately if it identifies areas where its previous activities are not consistent with the revisions made to the QAPP and FP. The EPA TOCOR will determine whether any modifications to the contractor's previous activities will be necessary, which may require a modification to the task order by the EPA Contracting Officer (CO).

- a. As demonstration of the contractor's commitment to adhere to the SDAM-NP-SP QAPP, the contractor shall:
- Ensure that all sampling personnel have reviewed and understand the requirements and procedures of the SDAM-NP-SP QAPP, and the SDAM-NP-SP Field Protocol FP which will be available prior to the field crew training sessions. The certification page entitled "Review & Distribution Acknowledgment and Commitment to Implement" is located in the introductory section of the QAPP.
 - At a minimum, the following personnel shall sign the certification page for the QAPP approved by EPA's Quality Assurance Officer (QAO):
 - Contractor's Task Order Leader
 - Contractor's Quality Assurance Officer,
 - **Each crew leader must provide the signed certification page before the crew may commence with sampling events.**
 - At the contractor's discretion, it may also be appropriate for each field crew member to sign the certification page and transmit to EPA.
 - The contractor's QAO also shall sign the certification page for each revision of the QAPP that has been approved by EPA's QAO.
 - If EPA distributes updated versions of the QA documents and states that it contains a "significant change" relevant to field sampling, the contractor shall acknowledge, in writing (e.g., Email), that it has received and distributed the revised QA documents to the appropriate personnel. If any change will impact the scope and/or cost of the task order, the contractor shall notify the TOCOR and CO immediately.
- b. **The contractor shall assign only staff who are Key Personnel (EPAAR 1552.237-72) to be field crew leaders (Tasks 6, 7, and 8) and ensure that the other field crew members have proper experience, field training, and acceptable educational credentials.** At a minimum, each proposed field crew leader shall have at least three years of experience in leading field crews; and at least three years of experience in conducting physical habitat assessments, hydrophytic plant identification, hydric soil identification, hydrologic monitoring of sites, and aquatic macroinvertebrate field identification. All field crew leaders shall also:

- i. **Complete the SDAM-NP-SP training requirements per Task 3.**
 - ii. Perform pre-sampling (i.e., in-office) testing of hardcopy and electronic field forms.
 - iii. **Verify that contractor's equipment (e.g., GPS system) is properly calibrated and maintained.**
 - iv. Permit EPA to perform an Assistance Visit (AV) of its field crews during an early sampling event (e.g., the first to fourteenth sampling event by a crew). If a field crew leader oversees more than one crew, EPA will determine if it is necessary to visit each crew or whether fewer visits will meet its quality review objectives (e.g., depending on crew composition, the crews might be viewed as essentially the same). The contractor shall coordinate with EPA, or its designee, on an agreed upon date and location for the AV. EPA, or its designee, will conduct the AV using a checklist provided by EPA, supplemented by photographs if appropriate (e.g., to record a deviation in methods due to extenuating circumstances). Although EPA will arrange for the AVs, it is the contractor's responsibility to ensure that the contractor field crews are abiding by the requirements and procedures of the QAPP and FP at all assigned sites.
- c. As demonstration of the contractor's implementation of QA in performing the other tasks in this PWS, the contractor shall document its QA activities as follows:
- i. Reports of relevant QA activities in any deliverable. All QA documentation prepared under the task order shall be considered non-proprietary, except for the internal distribution list which may be claimed proprietary.
 - ii. Monthly reports of QA activities performed during implementation of this task order. These monthly QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the SDAM-NP-SP QAPP, and corrective actions taken. The contractor shall include the QA report with the monthly progress report. In addition, the contractor shall immediately bring to the attention of the TOCOR any QA problems that may affect the conduct of the tasks or the project, with recommendations for corrective actions.
- d. As demonstration of the contractor's commitment to continuous quality improvements, the contractor shall provide summaries of "lessons learned" based upon its support to the other tasks. EPA will use this information to improve future development of flow duration assessment methods for streams. The contractor shall incorporate EPA comments into revised versions.

Deliverables and Schedule under Task 2:

Task	Deliverable	Due
2.a	Signature page for each version of QAPP approved by EPA's QAO:	

Task	Deliverable	Due
	<ul style="list-style-type: none"> - With contractor's QAO and Task Order Leader signatures. - With crew leader signature 	<ul style="list-style-type: none"> - No later than 5 working days after receiving the approved QAPP with EPA QAO's signature - At training
	Email acknowledgement of Field Protocol (FP) with "significant change"	No later than 10 working days after receiving revised FP
2.b	Memo with qualifications of field crew members, other than the field crew leaders	With first draft of the schedule for field crews in each season. Unless circumstances change unexpectedly, qualifications of replacements, except key personnel, must be submitted at least one week prior to the sampling event. See key personnel clause for process for replacements through a task order modification.
2b.ii	Email with outcome of testing field forms with any recommended changes	5 working days after receiving the first electronic/paper version of field forms. 1-5 working days after receiving subsequent versions, depending on extent of revision and schedule implications.
2.b.iii	Access to contractor's calibration and maintenance records	Within 5 working days after receiving written technical direction from the TOCOR (per Contract Clause H.12)
2.b.iv	Allow access for EPA or its designee to conduct an assistance visit to each field crew	Per written technical direction from the TOCOR (per Contract Clause H.12), based upon scheduling discussions occurring prior to each crews first sampling event
2.c.i	Documentation of QA activities	In deliverables
2.c.ii	Monthly reports of QA activities and immediate notice as needed	With monthly progress report and immediate notice as needed
2.d	Memorandum 1 with lessons learned for baseline data collection	Within 20 days from the end of the first sampling season. Revisions within 5 work days.
	Memorandum 2 with lessons learned for baseline and validation data collections	Within 30 days from the end of the last sampling event. Revisions within 5 work days.

Task 3. Field Training (Contract PWS C.1.g)

EPA and our designees will host at least one two day training session as soon as one month after award. This training will be at a location in the NP or SP region, use Kansas City, MO for cost estimation purposes. This training course will provide participants with training on the previously developed study design and to conduct baseline sampling according to the approved field protocol, an example of which can be found in PWS Attachment 1. (Note: the field protocol to be implemented throughout this TO may be identical to the example found in Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) work completed under this TO in Tasks 6 or 7). The trainings will also cover instrumentation of sites with Stream Temperature, Intermittency, and Conductivity (STIC) data loggers (to be provided and maintained by the contractor), as well as resampling, data retrieval, relaunching, and replacement (see PWS Attachment 2). The training will include one 2-hour webinar (e.g., overview and forms) and a 2 day in-person training including classroom and field training. It is preferable that all crew members participate in training activities, but at a minimum the contractor shall ensure that each field crew leader participates in a training session unless the EPA TOCOR issues written technical direction (per Contract Clause H.12). The contractor shall be responsible for maintaining records of training for all field crew leads and members in the project file, including names, dates, locations, and training description. The contractor shall report out, each month, on any associated training costs (e.g., travel, LOE, etc.) broken out by training using the template provided by the EPA TOCOR.

Deliverables and Schedule under Task 3:

Task	Deliverable	Due
3	Attend training webinar and class	As soon as one month after award
3	Maintain Training Record	As trainings occur
3	Report out on costs associated with attending EPA SDAM-NP-SP trainings	With monthly progress report

Task 4. Schedule (See Contract PWS C.2)

One purpose of the field sampling schedule is to ensure that the contractor will sample sites steadily during each sampling season (see Tasks 6, 7, and 8). Prior to the start of each season, EPA will provide the contractor with the list of sites to be sampled (unless the sampling is a follow-up visit to baseline sites), along with any details regarding priorities that must be taken into account in establishing the schedule (e.g., order of sampling for a specific season). As needed, the TOCOR shall issue written technical direction related to this information. Before the

start of each field season, the contractor shall provide EPA with the first draft with tentative sampling dates and crew assignments for all sites to be sampled that season. Throughout the season, the contractor shall revise the schedule to incorporate the EPA TOCOR's written technical direction (per Contract Clause H.12) or mitigating factors, including, but not limited to, weather, field crew changes, and unanticipated delays.

- a. Baseline site sampling schedule
- b. Baseline site first revisit schedule
- c. Baseline site second revisit and validation site sampling schedule
- d. For any site, if upon arrival on location, the contractor finds that conditions are not appropriate for sampling (i.e. the stream no longer exists), the contractor shall discontinue sampling and notify the EPA TOCOR that a replacement site is necessary. The contractor shall revise the schedule to include the new site.

Deliverables and Schedule under Task 4:

Task	Deliverable	Due
4.a	First draft of baseline site sampling schedule	First draft due within one week of receipt of site list. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.b	First draft of baseline site revisit schedule	First draft due within one month of the completion of baseline site sampling. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.c	First draft of baseline site and validation site sampling schedule	First draft due within three weeks of receipt of the validation site list. Revisions per written technical direction by the TOCOR (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.d	Notification of site conditions	As soon as possible per availability of phone or email access.

Task 5. Preparation for Field Sampling (See Contract PWS C.1)

The contractor shall prepare for field sampling visits as follows:

- a. The contractor shall be responsible for providing consumable materials as described in the QAPP and the Field Protocol. These materials include but are not limited to paper copies of field sheets, sampling containers, and consumable sampling equipment (e.g., paper towels, falcon tubes (filled with 70% ethanol), plastic bags).

- b. The contractor shall arrange for and supply vehicles, staff, and all other necessary non-consumable equipment to the field crews including, but not limited to, STIC data loggers, kicknets, field guides, clinometers, tape measurers, densimeters, and GPS devices.

Deliverables and Schedule under Task 5:

Task	Deliverable	Due
5.a	Consumable supplies	During field sampling visits
5.b	Supply equipment	During field sampling visits

Task 6. Initial Field Sampling Visits for Baseline Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 180 baseline sites across the NP and SP regions. The sites, which will be preselected by the steering committee, will be spread across the NP and SP regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more sites per day. During the initial site visit the contractor will conduct the approved sampling methodology, as well as deploy STIC loggers (to be provided and maintained by the contractor) at each site using the protocol found in PWS Attachment 2 - Stream Temperature, Intermittency, and Conductivity (STIC) Data Loggers Protocol. At 10% of the sites two STIC loggers will be deployed. The field protocol to be implemented under this Task may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, or 2) preparation work for the NP and SP regions. Water samples will not be collected as part of the protocol; however, voucher specimens will be collected to confirm identification (see PWS Attachment 1). When voucher specimens are needed, sample handling will be conducted in accordance with the QAPP and Field Protocol. Voucher specimens will be identified in the laboratory in accordance with the SOP for Processing BMI. Data will be entered onto paper data sheets (or a directly into a digital template, if available), and data sheets / digital template will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for

confirmation of identities) will be conducted in accordance with the QAPP.

- a. Instrumentation and initial baseline site visits for the combined NP and SP region

Following the site selection and approval of the sampling protocol by the steering committee, the contractor will oversee equipment installation and initial data collection for at least 180 baseline sites in the combined NP and SP region. Data collection, along with data entry and QA activities shall be completed within the first 3 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 6:

Task	Deliverable	Due
6.a	Collect data, complete data entry, and QA activities for all 180 baseline sites in the combined NP and SP regions	Within 3 months of task order award

Task 7. Follow-Up Field Sampling Visits for Baseline Sites (See Contract PWS C.2)

The contractor will conduct at least two additional site visits for all baseline sites across the NP and SP regions to implement the approved study design and sampling methodology. Follow-up site visits should be planned so that over the span of one year, all baseline sites will be visited a total of three times across multiple seasons; ideally, intermittent sites will be visited during both the wet and dry phases. During the follow-up site visits the contractor will conduct the approved indicator sampling methodology and download STIC logger data using the protocol found in PWS Attachment 2. The field protocol to be implemented under this Task may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the technical steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) preliminary findings from work completed under Task Area 6 of this TO. Water samples will not be collected as part of the protocol; however, voucher specimens will be collected to confirm identification (see PWS Attachment 1). Where voucher specimens are needed, sample handling will be conducted in accordance with the QAPP and Field Protocol. Voucher specimens will be identified in the laboratory in accordance with the SOP for Processing BMI. Data will be entered onto paper data sheets (or a directly into a digital template), and data sheets / digital template will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into an Access database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Second site visit for the NP and SP regions

Using the approved study design and the sampling protocol, the contractor will conduct a second site visit for all baseline sites in the NP and SP region. Data collection for the second site visits, along with data entry and QA activities, shall be completed within 9 months of task order award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Third site visit for the NP and SP region (Option Period 1 activity)

Using the approved study design and the sampling protocol, the contractor will conduct a third site visit for all baseline sites in the NP and SP region. Data collection for the third site visits, along with data entry and QA activities, shall be completed within 14 months of award, at which time the contractor shall provide the raw

sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 7:

Task	Deliverable	Due
7.a	Collect data, complete data entry, and QA activities for all 180 baseline sites in the NP and SP region	Within 9 months of task order award
7.b	Collect data, complete data entry, and QA activities for all 180 baseline sites in the NP and SP region	Within 14 months of task order award

Task 8. Field Sampling Visits for Validation Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 110 validation sites across the NP and SP regions with 10% identified as resample sites (total of 121 sampling events). The sites, which will be preselected by the technical steering committee, will be spread across the NP and SP regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more than sites per day. During the site visit the contractor will conduct the approved sampling methodology. The field protocol to be implemented under this Task Area may be identical to the example found in PWS Attachment 1 or may be a refined version based on mutually agreeable revisions made by EPA and the steering committee in response to the following: 1) completion of SDAM development work for the ASW and WM regions, 2) preparation work for the NP and SP regions, or 3) preliminary findings from work completed under Tasks 6 and 7 of this TO. Water samples will not be collected as part of the protocol; however, voucher specimens will be collected to confirm identification (see PWS Attachment 1). When voucher specimens are needed, sample handling will be conducted in accordance with the QAPP and Field Protocol. Voucher specimens will be identified in the laboratory in accordance with the SOP for Processing BMI. Data will be entered onto paper data sheets (or a directly into a digital template), and data sheets or digital template will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sending samples out for confirmation of identities) will be conducted in accordance with the QAPP.

a. Validation study for the NP and SP region

Following the site selection and approval of the sampling protocol by the technical steering committee, the contractor will oversee data collection for at least ~~440~~100 validation sites in the NP and SP region. Data collection, along with data entry and QA activities shall be completed within the first 12 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Validation study for the NP and SP region (Option Period)

Following the site selection and approval of the sampling protocol by the technical steering committee, the contractor will oversee data collection for the remaining 10

validation sites and the 11 site revisits in the NP and SP region. Data collection, along with data entry and QA activities shall be completed within 2 months of completion of the base period, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

Deliverables and Schedule under Task 8:

Task	Deliverable	Due
8.a	Collect data, complete data entry, and QA activities for all 40-100 validation sites (424-111 sampling events) in the NP and SP region	Within 12 months of task order award
<u>8.b</u>	<u>Collect data, complete data entry, and QA activities for all 10 validation sites and 11 revisits of validation sites (21 sampling events) in the NP and SP region (Option Period 1)</u>	<u>Within 2 months of completion of base period</u>

Task 9. Post-Sampling Activities (See Contract PWS C.2)

The contractor shall make field crews available to respond to EPA's post-sampling questions about the field sampling observations and procedures that might affect the data values and quality. If questions come from sources other than the EPA TOCOR (e.g., Other contractors working on this project), copy the EPA TOCOR on the email response or provide a summary by email (e.g., if the questions were posed through telephone conversations).

Unless the TOCOR grants an exception in accordance with agency procedures, the contractor shall refrain from publishing findings based upon work conducted under this task order. This restriction shall remain in effect until EPA provides public access to the data.

Deliverables and Schedule under Task 9:

Task	Deliverable	Due
9	Email responding to data questions	Within 5 working days, if field crew is available. Otherwise, provide email within 5 days with expected response date.

VI. TRAVEL

This section provides a summary of the travel requirements described in Section V. Assume each field crew contains 2 or more members, one of which is a crew leader. Here are assumptions to use in costing:

Task V.3 (Training) –

- All crew leaders, other key personnel and crew members attend a two day EPA coordinated training prior to starting field sampling. (Training location(s) will be within the NP and/or SP regions – Kansas City, MO can be used cost estimation; however, actual training location(s) selected after award may differ from those used in this costing.)

Task V.6, 7, and 8 (Sampling) –

- For every site, one field crew of 2 or more members travel to the site
- Total of 661 site visits identified in Tasks 6, 7, and 8.
- Travel costs are minimized to the extent possible (e.g., combining nearby sites into one trip for the same crew).

VII. Quality Assurance Surveillance Plan (QASP)

EPA will judge performance using the following Quality Assurance Surveillance Plan (QASP).

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
<p>Management and Communications:</p> <p>The Contractor shall maintain contact with the EPA TOCOR throughout the performance of the task order and shall immediately bring potential problems to the attention of the EPA TOCOR. In cases where issues have a direct impact on field sampling activities, project schedules (i.e., not each sampling event), cost, time, or quality, the contractor shall provide options for EPA's consideration on resolving the issues or mitigating their impacts.</p>	<p>Any issue adversely impacting project schedules, cost, time or quality shall be brought to the attention of the EPA TOCOR:</p> <p>i) If the contractor requires EPA guidance during a sampling event, the contractor must contact EPA prior to completing the sampling activities.</p> <p>ii) If the contractor identifies an issue that could affect multiple crews, the contractor shall contact EPA that day so that direction can be provided to all crews in the field.</p> <p>iii) If the contractor identifies sampling issues that are otherwise not urgent, the contractor shall contact EPA within 5 working days.</p>	<p>EPA TOCOR will identify unreported issues.</p>	<p>Four or more incidents where the contractor:</p> <ul style="list-style-type: none"> Does not provide timely notification; or Created a severe adverse situation <p>will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p> <p>Fewer than four incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p>
<p>Timeliness:</p> <p>Completed field sampling data forms and data shall be delivered in accordance with the requirements of the QAPP.</p>	<p>No more than 10% of the database entry and field sampling forms shall be submitted more than 5 working days past the requirements in the QAPP. If the field form or database entry has not been completed correctly, it will be considered a failure of timeliness.</p>	<p>Delivery for 100% of the database entry and field forms will be tracked by the EPA TOCOR and compared against the requirements in the QAPP.</p>	<p>10 or more incidents where the contractor does not meet the measurable performance will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Schedule.</p> <p>Fewer than ten incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System.</p>
<p>Cost Management and Control:</p> <p>The Contractor shall monitor, track, and accurately report cost and</p>	<p>The contractor shall manage costs to the level of approved ceiling on the task order. The contractor shall notify the TOCOR, PO and CO when 75% of the</p>	<p>The TOCOR will compare actual versus projected expenditures on a monthly basis (via meetings, monthly progress reports &</p>	<p>Unsatisfactory rating under the category of Cost Control in CPARS when the contractor does not meet the</p>

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
fee expenditures to EPA through progress reports and approved special reporting requirements. The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate cost control.	approved funding ceiling for the task order is reached.	milestones established for each deliverable).	measurable performance standards. An acceptable rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the measurable performance standards and accurately reports the costs.
Technical Effort: The Contractor shall assign appropriately leveled and skilled personnel to all tasks; and abide by the contractor's QMP, the field protocol, and QAPP.	No more than 25% of reviewed deliverables and data shall require revisions to meet the requirements. All of the assigned staff must meet the requirements in the field protocol, and QAPP.	100% of the data and staffing will be reviewed by the EPA TOCOR to identify noncompliance issues.	Unsatisfactory rating under the category of Quality in CPARS when the contractor does not meet the measurable performance standards during an applicable period of performance.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE OF PAGES 1 3			
2. AMENDMENT/MODIFICATION NO. P00005		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. See Schedule		5. PROJECT NO. (If applicable)		
6. ISSUED BY CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001		CODE CAD		7. ADMINISTERED BY (If other than Item 6)		CODE		
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) ESS GROUP, INC. Attn: ROBERT ERICKSON 10 HEMINGWAY DR # 2 RIVERSIDE RI 02915				(X)			9A. AMENDMENT OF SOLICITATION NO.	
							9B. DATED (SEE ITEM 11)	
				X			10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-16-006 68HERC19F0290	
							10B. DATED (SEE ITEM 13) 09/19/2019	
CODE 019131986		FACILITY CODE						
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS								
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.								
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule								
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.								
CHECK ONE		A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
		B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
X		C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Bilateral - FAR 52.232-22 and Mutual Agreement of the Parties						
		D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input type="checkbox"/> is not <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.								
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) DUNS Number: 019131986 The purpose of this modification is to shift funding in the (b)(4) (b)(4) accordance with the attached Recapitulation sheet. This results in a (b)(4) (b)(4)								
TOCOR: Brian Topping Max Expire Date: 04/18/2021 Invoice Approver: Brian Topping Alt Invoice App: Damaris Christensen LIST OF CHANGES: Reason for Modification: Other Administrative Action								
Continued ...								
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.								
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)				
				Sandra Stargardt-Licis				
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED		
(Signature of person authorized to sign)				ELECTRONIC SIGNATURE		01/04/2021		
				(Signature of Contracting Officer)				

Previous edition unusable

NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 04/18/2021 All other terms and conditions remain unchanged.				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 3	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00006		See Block 16C		PR-OW-21-00824			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
ESS GROUP, INC. Attn: ROBERT ERICKSON 10 HEMINGWAY DR # 2 RIVERSIDE RI 02915							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-16-006			
				68HERC19F0290			
				10B. DATED (SEE ITEM 13)			
				09/19/2019			
CODE 019131986		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				(b)(4)			
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
x	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Bilateral - FAR 52.232-22 and Mutual Agreement of the Parties						
	D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input type="checkbox"/> is not <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 019131986							
The purpose of this modification is to (b)(4) from							
the Option Period in accordance with the attached recapitulation sheets.							
TOCOR: Brian Topping Max Expire Date: 04/18/2021 Invoice Approver: Brian Topping Alt Invoice							
App: Damaris Christensen							
LIST OF CHANGES:							
Reason for Modification: Funding Only Action							
New Total Amount for this Version: (b)(4)							
New Total Amount for this Award: (b)(4)							
Obligated Amount for this Modification: (b)(4)							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Sandra Stargardt-Licis			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				ELECTRONIC SIGNATURE		09/07/2021	
				(Signature of Contracting Officer)			

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00006PAGE OF
2 3NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>New Total Obligated Amount for this Award: (b)(4)</p> <p>CHANGES FOR LINE ITEM NUMBER: 2 Obligated Amount for this Modification: (b)(4)</p> <p>CHANGES FOR ACCOUNTING CODE: 20-21-B-87DE-000B88-2505-2087EE4011-001 (b)(4)</p> <p>CHANGES FOR ACCOUNTING CODE: 20-21-B-87DE-000B88-2505-2087EE4007-001 (b)(4)</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 04/18/2021 All other terms and conditions remain unchanged.</p>				

SECTION B - Supplies or Services/Prices

B-3 Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

OPTION PERIOD

(a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Pursuant to clause 52.232-22/Limitation of Funds, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractor's performance through 04/18/2021.

(b) When the contract is fully funded as specified in clause EPA-B-16-102/ Estimated Cost and Fixed Fee, then clause 52.232-20/Limitation of Cost shall become applicable.

(c) Recapitulation of Funds

RECAPITULATION OF FUNDING TO DATE BY CONTRACT PERIOD

CONTRACT NO. EP-C-16-006

TASK ORDER NO. 68HERC19F0290

Option Period 1 - FROM 9/19/2020 through 4/18/2021

<u>FUNDING ACTION</u>	<u>ESTIMATED COST</u>	<u>FIXED FEE</u>	<u>TOTAL COST PLUS FIXED FEE</u>
P00001	(b)(4)	(b)(4)	\$ 209,895.00
P00004			\$ 38,950.00
P00006			\$ (13,610.65)
Total Funded			\$ 235,234.35
Total Per Contract			\$ 248,845.00
Balance Unfunded			\$ 13,610.65

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 3	
2. AMENDMENT/MODIFICATION NO. P00007		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY CODE CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) ESS GROUP, INC. Attn: ROBERT ERICKSON 10 HEMINGWAY DR # 2 RIVERSIDE RI 02915		(x)		9A. AMENDMENT OF SOLICITATION NO.	
CODE 019131986		FACILITY CODE		9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-16-006 68HERC19F0290	
				10B. DATED (SEE ITEM 13) 09/19/2019	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule		(b)(4)			
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).				
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Unilateral - FAR 52.232-22				
	D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)					
DUNS Number: 019131986 The purpose of this modification is to correct an administrative error in P00006 that deobligated (b)(4) from Option Period 1. Only (b)(4) should be deobligated from Option Period 1 in accordance with the attached recapitulation sheets. This modification corrects the changes for accounting code 20-21-B-87DE-000B88-2505-2087EE4007-001 that incorrectly reduced the amount (b)(4) in P00006, by correctly changing the total back to (b)(4) TOCOR: Brian Topping Max Expire Date: 04/18/2021 InvoiceApprover: Brian Topping Alt Invoice App: Damaris Christensen LIST OF CHANGES:					
Continued ...					
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Sandra Stargardt-Licis			
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

Previous edition unusable

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-16-006/68HERC19F0290/P00007PAGE OF
2 3NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount for this Modification: (b)(4)</p> <p>New Total Obligated Amount for this Award: (b)(4)</p> <p>CHANGES FOR LINE ITEM NUMBER: 2</p> <p>Obligated Amount for this Modification: (b)(4)</p> <p>CHANGES FOR ACCOUNTING CODE: 20-21-B-87DE-000B88-2505-2087EE4007-001 (b)(4)</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 04/18/2021 All other terms and conditions remain unchanged.</p>				

SECTION B - Supplies or Services/Prices

B-3 Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

OPTION PERIOD

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(b) When the contract is fully funded as specified in clause EPA-B-16-102/ Estimated Cost and Fixed Fee, then clause 52.232-20/Limitation of Cost shall become applicable.

(c) Recapitulation of Funds

RECAPITULATION OF FUNDING TO DATE BY CONTRACT PERIOD

CONTRACT NO. EP-C-16-006

TASK ORDER NO. 68HERC19F0290

Option Period 1 - FROM 9/19/2020 through 4/18/2021

FUNDING ACTION	ESTIMATED COST	FIXED FEE	TOTAL COST PLUS FIXED FEE
P00001	(b)(4)	(b)(4)	\$ 209,895.00
P00004			\$ 38,950.00
P00006			\$ (13,610.65)
P00007			\$ 49.26
Total Funded			\$ 235,283.61
Total Per Contract			\$ 248,845.00
Balance Unfunded			\$ 13,561.39